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1914

CALAIS HARBOUR

Position of the Port.

Coast Lines near Calais.

Roads and Inner Channel.

Description, Plan, Views of the Harbour.

Advantages and Accommodation it Affords
to Shipping.

TIDE TABLES. — DEPTHS OF WATER.

HARBOUR SIGNALS.

HARBOUR DUES, TARIFFS, ETC.

General Statute Rules and Regulations.

MARINE CHART OF THE STRAITS

Showing the depths of water of the Roads and of the
access to Calais Harbour.

GENERAL INFORMATION.

Printed by

ALEXANDRE SEL, 62, BOULEVARD JACQUARD
CALAIS

PLAN OF THE PORT OF CALAIS

FRANCE

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PLAN OF THE PORT



F CALAIS (FRANCE)



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CALAIS HARBOUR

TIDE TABLES

DEPTHS OF WATER

HIGH WATER

		Ft.	in.
Pier-Head.	Spring tides	37	9
	Neap tides	33	5
Carnot dock and Dry dock lock sills	Spring tides	28	8
	Neap tides	24	5
North quay, Eastern Tidal Basin	Spring tides	37	9
	Neap tides	33	5
South quay, Eastern Tidal Basin	Spring tides	46	8
	Neap tides	41	8
West Dock Locks Sills	Spring tides	29	5
	Neap tides	25	2

LOW WATER

North quay, Eastern Tidal Basin	Spring tides	14	11
	Neap tides	18	9
South quay, Eastern Tidal Basin	Spring tides	26	3
	Neap tides	29	6

9 Sept. 16 Calais Chamber of Commerce

JANUARY

HIGH WATER

Days of the month	Days of the week	A. M.			P. M.		
		Time	Depths of the annual	Depths of water Carnot Dock Lock sills	Time	Depths of the annual	Depths of water Carnot Dock Lock sills
		H. M.	Ft. in.	Ft. in.	H. M.	Ft. in.	Ft. in.
1	Th	2 12	21 0	26 11	2 30	21 2	27 1
2	F	2 49	20 4	26 3	3 9	20 8	26 7
3	S	3 29	19 10	25 9	3 49	20 0	25 11
4		4 10	19 2	25 1	4 33	19 2	25 1
5	M	4 59	18 8	24 7	5 27	18 10	24 9
6	T	5 58	18 4	24 3	6 28	18 6	24 5
7	W	7 1	18 3	24 1	7 38	18 6	24 5
8	Th	8 9	18 8	24 7	8 41	18 10	24 9
9	F	9 10	19 4	25 3	9 37	19 8	25 7
10	S	10 2	20 4	26 3	10 28	20 6	26 5
11	S	10 49	21 2	27 1	11 11	21 2	27 1
12		11 33	21 10	27 9	11 55	21 10	27 9
13	T	... ..	... ..	... ..	0 15	22 6	28 5
14	W	0 37	22 4	28 3	0 58	22 10	28 8
15	Th	1 20	22 6	28 5	1 41	23 0	28 10
16	F	2 2	22 6	28 5	2 24	22 10	28 8
17	S	2 45	22 2	28 1	3 7	22 4	28 3
18	S	3 30	21 6	27 5	3 54	21 8	27 7
19		4 19	20 10	26 9	4 46	20 8	26 7
20	T	5 17	20 0	25 11	5 50	19 10	25 9
21	W	6 25	19 2	25 1	7 5	19 2	25 1
22	Th	7 47	19 2	25 1	8 27	19 2	25 1
23	F	9 6	19 10	25 9	9 39	19 10	25 9
24	S	10 10	20 6	26 5	10 37	20 6	26 5
25	S	11 1	21 2	27 1	11 25	21 2	27 1
26		11 45	21 10	27 9	... ..	... ..	... ..
27	T	0 4	21 8	27 7	0 23	22 2	28 1
28	W	0 42	21 10	27 9	0 59	22 2	28 1
29	Th	1 16	21 10	27 9	1 31	22 2	28 1
30	F	1 47	21 6	27 5	2 2	21 10	27 9
31	S	2 17	21 2	27 1	2 32	21 4	27 3

JANUARY

LOW WATER

Days of the month	Days of the week	A. M.						P. M.					
		Time		Depths of the annual		Depths of water South Quay Tidal Basin		Time		Depths of the annual		Depths of water South Quay Tidal Basin	
		H.	M.	Ft.	in.	Ft.	in.	H.	M.	Ft.	in.	Ft.	in.
1	Th	9	10	4	1	27	1	9	29	4	1	27	1
2	F	9	48	4	9	27	9	10	7	4	7	27	7
3	S	10	26	5	3	28	3	10	46	5	3	28	3
4		11	7	5	11	28	10	11	32	5	11	28	10
5	M	11	58	6	5	29	4	...	...	...	...	...	...
6	T	0	27	6	3	29	2	0	57	6	9	29	8
7	W	1	30	6	5	29	4	2	4	6	9	29	8
8	Th	2	39	6	3	29	2	3	12	6	3	29	2
9	F	3	44	5	7	28	7	4	13	5	7	28	7
10	S	4	40	5	3	28	3	5	6	4	9	27	9
11	S	5	30	4	5	27	5	5	53	3	11	26	11
12		6	15	3	9	26	9	6	37	3	3	26	3
13	T	6	58	3	1	26	1	7	19	2	9	25	9
14	W	7	39	2	9	25	9	8	0	2	7	25	7
15	Th	8	22	2	9	25	9	8	43	2	6	25	5
16	F	9	3	2	9	25	9	9	24	2	7	25	7
17	S	9	45	2	11	25	11	10	6	2	11	25	11
18	S	10	28	3	7	26	7	10	53	3	7	26	7
19		11	19	4	3	27	3	11	47	4	3	27	3
20	T	...	...	...	...	...	...	0	18	5	1	28	1
21	W	0	52	5	3	28	3	1	30	5	9	28	8
22	Th	2	12	5	7	28	7	2	54	5	9	28	8
23	F	3	35	5	5	28	5	4	12	5	3	28	3
24	S	4	44	4	11	27	11	5	14	4	3	27	3
25	S	5	41	4	1	27	1	6	6	3	9	26	9
26		6	28	3	7	26	7	6	47	3	1	26	1
27	T	7	6	3	3	26	3	7	25	2	11	25	11
28	W	7	42	3	1	26	1	7	59	2	9	25	9
29	Th	8	15	3	1	26	1	8	30	2	11	25	11
30	F	8	45	3	3	26	3	8	59	3	1	26	1
31	S	9	14	3	7	26	7	9	29	3	7	26	7

FEBRUARY

HIGH WATER

Days of the month	Days of the week	A. M.			P. M.		
		Time	Depths of the annual	Depths of water Carnot Dock Lock sills	Time	Depths of the annual	Depths of water Carnot Dock Lock sills
		H. M.	Ft. in.	Ft. in.	H. M.	Ft. in.	Ft. in.
1	S	2 48	20 8	26 7	3 3	20 8	26 7
2	M	3 20	20 0	25 11	3 37	19 10	25 9
3	☾	3 56	19 0	24 11	4 16	18 10	24 9
4	W	4 40	18 3	24 1	5 10	17 11	23 9
5	Th	5 46	17 9	23 7	6 25	17 7	23 6
6	F	7 7	17 9	23 7	7 55	17 11	23 9
7	S	8 34	18 4	24 3	9 12	18 8	24 7
8	S	9 43	19 8	25 7	10 10	20 0	25 11
9	M	10 35	20 10	26 9	10 58	21 2	27 1
10	☉	11 19	22 0	27 11	11 41	22 2	28 1
11	W	... ..	... ..	... ..	0 2	23 0	28 10
12	Th	0 23	23 0	28 10	0 43	23 6	29 4
13	F	1 3	23 4	29 2	1 23	23 7	29 6
14	S	1 42	23 4	29 2	2 3	23 6	29 4
15	S	2 23	23 0	28 10	2 42	23 0	28 10
16	M	3 2	22 2	28 1	3 25	21 8	27 7
17	☾	3 47	20 10	26 9	4 12	20 4	26 3
18	W	4 39	19 6	25 5	5 14	18 10	24 9
19	Th	5 54	18 4	24 3	6 41	17 11	23 9
20	F	7 34	18 3	24 1	8 22	18 1	23 11
21	S	9 6	18 10	24 9	9 40	19 0	24 11
22	S	10 9	20 0	25 11	10 34	20 0	25 11
23	M	10 56	20 10	26 9	11 15	20 10	26 9
24	T	11 33	21 8	27 7	11 50	21 6	27 5
25	☉	... ..	... ..	... ..	0 5	22 2	28 1
26	Th	0 21	22 0	27 11	0 36	22 4	28 3
27	F	0 50	22 0	27 11	1 4	22 4	28 3
28	S	1 18	22 0	27 11	1 31	22 2	28 1

FEBRUARY

LOW WATER

Days of the month	Days of the week	A. M.			P. M.		
		Time	Depths of the annual	Depths of water South Quay Tidal Basin	Time	Depths of the annual	Depths of water South Quay Tidal Basin
		H. M.	Ft. in.	Ft. in.	H. M.	Ft. in.	Ft. in.
1	S	9 45	4 1	27 1	10 0	4 1	27 1
2	M	10 16	4 11	27 11	10 33	5 1	28 1
3	W	10 53	5 9	28 8	11 14	5 11	28 10
4	Th	11 40	6 7	29 6	...	...	...
5	F	0 12	6 9	29 8	0 49	7 1	30 0
6	S	1 31	7 1	30 0	2 17	7 1	30 0
7	S	3 1	6 9	29 8	3 41	6 3	29 2
8	S	4 17	5 7	28 7	4 47	5 1	28 1
9	M	5 13	4 5	27 5	5 38	3 9	26 9
10	W	6 2	3 5	26 5	6 22	2 9	25 9
11	Th	6 44	2 7	25 7	7 5	2 2	25 1
12	F	7 25	2 0	24 11	7 45	1 6	24 5
13	S	8 5	1 8	24 7	8 23	1 4	24 3
14	S	8 43	1 8	24 7	9 3	1 8	24 7
15	M	9 22	2 4	25 3	9 41	2 6	25 5
16	W	10 1	2 11	25 11	10 23	3 3	26 3
17	Th	10 46	4 1	27 1	11 11	4 7	27 7
18	F	11 42	5 7	28 7	...	...	...
19	S	0 18	6 1	29 0	1 3	6 7	29 6
20	S	1 53	6 9	29 8	2 44	6 7	29 6
21	M	3 32	6 1	29 0	4 13	5 7	28 7
22	T	4 45	5 3	28 3	5 12	4 5	27 5
23	W	5 37	4 3	27 3	5 57	3 9	26 9
24	Th	6 17	3 7	26 7	6 34	2 11	25 11
25	F	6 50	3 1	26 1	7 6	2 9	25 9
26	S	7 21	2 9	25 9	7 35	2 7	25 7
27	S	7 49	2 9	25 9	8 2	2 7	25 7
28	S	8 16	2 9	25 9	8 28	2 9	25 9

MARCH

HIGH WATER

Days of the month	Days of the week	A. M.			P. M.		
		Time	Depths of the annual	Depths of water Carnot Dock Lock sills	Time	Depths of the annual	Depths of water Carnot Dock Lock sills
		H. M.	Ft. in.	Ft. in.	H. M.	Ft. in.	Ft. in.
1	S	1 44	21 8	27 7	1 58	21 8	27 7
2	M	2 12	21 2	27 1	2 26	21 0	26 11
3	T	2 40	20 6	26 5	2 55	20 2	26 1
4	W	3 11	19 8	25 7	3 30	19 0	24 11
5	⑤	3 51	18 6	24 5	4 15	17 11	23 9
6	F	4 47	17 7	23 6	5 29	17 1	23 0
7	S	6 20	17 3	23 2	7 15	17 3	23 2
8	S	8 6	18 1	23 11	8 49	18 4	24 3
9	M	9 23	19 6	25 5	9 50	20 0	25 11
10	T	10 14	21 2	27 1	10 38	21 6	27 5
11	W	10 59	22 6	28 5	11 19	22 10	28 8
12	Ⓜ	11 39	23 6	29 4	11 59	23 6	29 4
13	F	... ..	... ..	... ..	0 19	23 9	29 8
14	S	0 38	23 9	29 8	0 58	23 11	29 10
15	S	1 18	23 7	29 6	1 37	23 7	29 6
16	M	1 58	23 2	29 0	2 16	22 10	28 8
17	T	2 36	22 0	27 11	2 58	21 4	27 3
18	Ⓜ	3 21	20 8	26 7	3 46	19 8	25 7
19	Th	4 15	19 0	24 11	4 49	18 1	23 11
20	F	5 34	17 11	23 9	6 28	17 5	23 4
21	S	7 25	17 11	23 9	8 14	17 11	23 9
22	S	8 53	18 10	24 9	9 27	18 10	24 9
23	M	9 51	20 0	25 11	10 15	20 0	25 11
24	T	10 34	20 10	26 9	10 52	20 10	26 9
25	W	11 8	21 6	27 5	11 23	21 6	27 5
26	●	11 39	22 0	27 11	11 52	21 10	27 9
27	F	... ..	... ..	... ..	0 5	22 2	28 1
28	S	0 19	22 2	28 1	0 32	22 4	28 3
29	S	0 47	22 0	27 11	1 0	22 0	27 11
30	M	1 13	21 10	27 9	1 26	21 8	27 7
31	T	1 40	21 4	27 3	1 55	21 0	26 11

MARCH

LOW WATER

Days of the month	Days of the week	A. M.			P. M.		
		Time	Depths of the annual	Depths of water South Quay Tidal Basin	Time	Depths of the annual	Depths of water South Quay Tidal Basin
1	S	8 42	3 1	26 1	8 56	3 1	26 1
2	M	9 9	3 7	26 7	9 23	3 9	26 9
3	T	9 37	4 1	27 1	9 51	4 7	27 7
4	W	10 8	5 3	28 3	10 27	5 9	28 8
5	Th	10 50	6 3	29 2	11 17	6 11	29 10
6	F	11 54	7 3	30 2	...	...	...
7	S	0 39	7 5	30 4	1 33	7 3	30 2
8	S	2 27	7 1	30 0	3 16	6 5	29 4
9	M	3 55	5 9	28 8	4 26	4 9	27 9
10	T	4 52	4 1	27 1	5 17	3 3	26 3
11	W	5 40	2 11	25 11	6 2	2 4	25 3
12	Th	6 22	2 0	24 11	6 42	1 4	24 3
13	F	7 2	1 4	24 3	7 21	0 10	23 9
14	S	7 40	1 0	23 11	8 0	0 10	23 9
15	S	8 19	1 4	24 3	8 38	1 4	24 3
16	M	8 58	2 0	24 11	9 16	2 6	25 5
17	T	9 37	2 11	25 11	9 58	3 7	26 7
18	Th	10 21	4 3	27 3	10 47	5 3	28 3
19	Th	11 18	5 11	28 10	11 57	6 9	29 8
20	F	...	...	...	0 45	6 4	29 10
21	S	1 41	7 1	30 0	2 36	6 9	29 8
22	S	3 21	6 5	29 4	3 59	5 7	28 7
23	M	4 29	5 5	28 5	4 53	4 5	27 5
24	T	5 15	4 3	27 3	5 35	3 7	26 7
25	W	5 52	3 7	26 7	6 8	2 11	25 11
26	Th	6 24	2 11	25 11	6 38	2 7	25 7
27	F	6 52	2 9	25 9	7 5	2 7	25 7
28	S	7 18	2 7	25 7	7 31	2 7	25 7
29	S	7 45	2 9	25 9	7 58	2 9	25 9
30	M	8 11	2 11	25 11	8 23	3 1	26 1
31	T	8 38	3 5	26 5	8 53	3 9	26 9

APRIL

HIGH WATER

Days of the month	Days of the week	A. M.			P. M.		
		Time	Depths of the annual	Depths of water Carnot Dock Lock sills	Time	Depths of the annual	Depths of water Carnot Dock Lock sills
		H. M.	Ft. in.	Ft. in.	H. M.	Ft. in.	Ft. in.
1	W	2 10	20 8	26 7	2 26	20 2	26 1
2	Th	2 42	19 10	25 9	3 3	19 0	24 11
3	F	3 23	18 10	24 9	3 49	18 1	23 11
4	S	4 21	17 11	23 9	5 3	17 3	23 2
5	S	5 55	17 7	23 6	6 49	17 7	23 6
6	M	7 40	18 4	24 3	8 19	18 8	24 7
7	T	8 51	20 0	25 11	9 20	20 4	26 3
8	W	9 44	21 6	27 5	10 7	21 10	27 9
9	Th	10 28	22 10	28 8	10 50	23 0	28 10
10	F	11 10	23 6	29 4	11 30	23 7	29 6
11	S	11 50	23 9	29 8	...	...	...
12	S	0 11	23 9	29 8	0 32	23 9	29 8
13	M	0 52	23 6	29 4	1 12	23 4	29 2
14	T	1 34	23 0	28 10	1 54	22 4	28 3
15	W	2 18	21 8	27 7	2 40	20 10	26 9
16	Th	3 5	20 4	26 3	3 32	19 2	25 1
17	F	4 3	19 0	24 11	4 38	17 11	23 9
18	S	5 21	18 1	23 11	6 9	17 7	23 6
19	S	6 58	18 1	23 11	7 43	17 11	23 9
20	M	8 20	18 10	24 9	8 49	18 10	24 9
21	T	9 16	19 8	25 7	9 37	19 10	25 9
22	W	9 57	20 6	26 5	10 15	20 6	26 5
23	Th	10 32	21 0	26 11	10 48	21 2	27 1
24	F	11 3	21 6	27 5	11 18	21 6	27 5
25	S	11 32	21 8	27 7	11 46	21 8	27 7
26	S	...	...	...	0 1	21 10	27 9
27	M	0 16	21 10	27 9	0 31	21 8	27 7
28	T	0 45	21 8	27 7	1 1	21 4	27 3
29	W	1 17	21 2	27 1	1 33	20 10	26 9
30	Th	1 51	20 8	26 7	2 8	20 2	26 1

APRIL

LOW WATER

Days of the month	Days of the week	A. M.			P. M.		
		Time	Depths of the annual	Depths of water South Quay Tidal Basin	Time	Depths of the annual	Depths of water South Quay Tidal Basin
		H. M.	Ft. in.	Ft. in.	H. M.	Ft. in.	Ft. in.
1	W	9 8	3 11	26 11	9 24	4 7	27 7
2	Th	9 41	5 1	28 1	10 1	5 9	28 8
3	F	10 23	6 1	29 0	10 51	6 9	29 8
4	S	11 28	6 11	29 10	...	...	...
5	S	0 14	7 3	30 2	1 6	7 1	30 0
6	M	1 59	6 9	29 8	2 45	5 11	28 10
7	T	3 23	5 5	28 5	3 55	4 3	27 3
8	W	4 22	3 9	26 9	4 46	2 11	25 11
9	Th	5 9	2 7	25 7	5 31	2 0	24 11
10	⊕	5 52	1 8	24 7	6 13	1 2	24 1
11	S	6 33	1 0	23 11	6 53	1 0	23 11
12	S	7 14	1 2	24 1	7 34	1 2	24 1
13	M	7 54	1 6	24 5	8 14	1 10	24 9
14	T	8 37	2 4	25 3	8 58	2 11	25 11
15	W	9 19	3 3	26 3	9 42	4 1	27 1
16	Th	10 6	4 9	27 9	10 34	5 9	28 8
17	⊙	11 6	5 11	28 10	11 45	6 9	29 8
18	S	...	...	...	0 30	6 9	29 8
19	S	1 18	6 11	29 10	2 5	6 5	29 4
20	M	2 48	6 3	29 2	3 22	5 7	28 7
21	T	3 52	5 5	28 5	4 16	4 7	27 7
22	W	4 38	4 5	27 5	4 57	3 9	26 9
23	Th	5 14	3 9	26 9	5 32	3 3	26 3
24	F	5 47	3 3	26 3	6 3	2 11	25 11
25	☉	6 18	3 1	26 1	6 32	2 11	25 11
26	S	6 46	2 11	25 11	7 2	2 11	25 11
27	M	7 16	2 11	25 11	7 30	3 1	26 1
28	T	7 45	3 1	26 1	8 0	3 5	26 5
29	W	8 16	3 7	26 7	8 33	4 1	27 1
30	Th	8 50	4 1	27 1	9 8	4 9	27 9

MAY

HIGH WATER

Days of the month	Days of the week	A. M.						P. M.					
		Time		Depths of the annual		Depths of water Carnot Dock Lock sills		Time		Depths of the annual		Depths of water Carnot Dock Lock sills	
		H.	M.	Ft.	in.	Ft.	in.	H.	M.	Ft.	in.	Ft.	in.
1	F	2	27	20	0	25	11	2	48	19	2	25	1
2	S	3	13	19	2	25	1	3	41	18	4	24	3
3		4	15	18	6	24	5	4	54	17	11	23	9
4	M	5	38	18	4	24	3	6	21	18	3	24	1
5	T	7	2	19	2	25	1	7	41	19	2	25	1
6	W	8	13	20	4	26	3	8	41	20	8	26	7
7	Th	9	7	21	6	27	5	9	31	21	10	27	9
8	F	9	54	22	6	28	5	10	18	22	10	28	8
9		10	40	23	2	29	0	11	2	23	2	29	0
10	S	11	25	23	4	29	2	11	46	23	2	29	0
11	M	...	...	...	...	...	...	0	9	23	2	29	0
12	T	0	32	23	0	28	10	0	55	22	8	28	7
13	W	1	19	22	4	28	3	1	41	21	8	27	7
14	Th	2	4	21	6	27	5	2	28	20	6	26	5
15	F	2	54	20	6	26	5	3	21	19	4	25	3
16		3	49	19	4	25	3	4	22	18	4	24	3
17	S	4	56	18	10	24	9	5	34	18	1	23	11
18	M	6	11	18	6	24	5	6	50	18	1	23	11
19	T	7	22	18	10	24	9	7	54	18	8	24	7
20	W	8	22	19	2	25	1	8	44	19	2	25	1
21	Th	9	8	19	10	25	9	9	29	20	0	25	11
22	F	9	49	20	2	26	1	10	6	20	6	26	5
23	S	10	26	20	8	26	7	10	43	20	10	26	9
24	S	11	0	21	0	26	11	11	17	21	2	27	1
25		11	34	21	2	27	1	11	51	21	4	27	3
26	T	...	...	...	...	...	...	0	8	21	2	27	1
27	W	0	26	21	4	27	3	0	43	21	0	26	11
28	Th	1	2	21	2	27	1	1	21	20	10	26	9
29	F	1	39	21	0	26	11	2	0	20	4	26	3
30	S	2	23	20	6	26	5	2	45	19	10	25	9
31	S	3	9	20	0	25	11	3	37	19	4	25	3

MAY

LOW WATER

Days of the month	Days of the week	A. M.			P. M.		
		Time	Depths of the annual	Depths of water South Quay Tidal Basin	Time	Depths of the annual	Depths of water South Quay Tidal Basin
		H. M.	Ft. in.	Ft. in.	H. M.	Ft. in.	Ft. in.
1	F	9 27	4 11	27 11	9 50	5 7	28 7
2	S	10 14	5 9	28 8	10 44	6 3	29 2
3	☾	11 20	6 3	29 2	...	...	...
4	M	0 1	6 7	29 6	0 44	6 1	29 0
5	T	1 27	5 11	28 10	2 7	5 1	28 1
6	W	2 43	4 9	27 9	3 15	3 9	26 9
7	Th	3 42	3 7	26 7	4 9	2 9	25 9
8	F	4 33	2 7	25 7	4 58	2 4	25 3
9	☉	5 20	2 2	25 1	5 43	1 8	24 7
10	S	6 6	1 8	24 7	6 28	1 8	24 7
11	M	6 51	1 10	24 9	7 14	2 0	24 11
12	T	7 35	2 4	25 3	7 58	2 7	25 7
13	W	8 21	2 9	25 9	8 43	3 3	26 3
14	Th	9 6	3 7	26 7	9 30	4 3	27 3
15	F	9 56	4 5	27 5	10 22	5 5	28 5
16	☾	10 52	5 5	28 5	11 25	6 1	29 0
17	S	...	...	...	0 1	5 11	28 10
18	M	0 37	6 5	29 4	1 15	5 11	28 10
19	T	1 52	6 1	29 0	2 24	5 7	28 7
20	W	2 55	5 7	28 7	3 21	5 1	28 1
21	Th	3 44	5 1	28 1	4 8	4 5	27 5
22	F	4 29	4 5	27 5	4 48	3 11	26 11
23	S	5 7	3 11	26 11	5 26	3 9	26 9
24	S	5 43	3 9	26 9	6 2	3 7	26 7
25	☉	6 18	3 5	26 5	6 35	3 5	26 5
26	T	6 52	3 5	26 5	7 10	3 7	26 7
27	W	7 27	3 5	26 5	7 45	3 9	26 9
28	Th	8 3	3 7	26 7	8 21	3 11	26 11
29	F	8 41	3 11	26 11	9 1	4 3	27 3
30	S	9 24	4 3	27 3	9 46	4 11	27 11
31	S	10 11	4 9	27 9	10 39	5 3	28 3

JUNE

HIGH WATER

Days of the month	Days of the week	A. M.				P. M.			
		Time		Depths of the annual	Depths of water Carnot Dock Lock sills	Time		Depths of the annual	Depths of water Carnot Dock Lock sills
		H.	M.	Ft. in.	Ft. in.	H.	M.	Ft. in.	Ft. in.
1	☾	4	7	19 8	25 7	4	38	19 2	25 1
2	T	5	14	19 8	25 7	5	50	19 4	25 3
3	W	6	25	20 0	25 11	6	58	19 10	25 9
4	Th	7	31	20 6	26 5	8	1	20 8	26 7
5	F	8	29	21 2	27 1	8	57	21 4	27 3
6	S	9	25	21 8	27 7	9	51	21 10	27 9
7	S	10	8	22 0	27 11	10	43	22 4	28 3
8	☉	11	8	22 4	28 3	11	33	22 6	28 5
9	T	11	57	22 2	28 1	...	...	...	...
10	W	0	22	22 6	28 5	0	46	21 10	27 9
11	Th	1	9	22 2	28 1	1	32	21 4	27 3
12	F	1	56	21 8	27 7	2	18	20 10	26 9
13	S	2	40	20 10	26 9	3	4	20 0	25 11
14	S	3	29	20 2	26 1	3	53	19 4	25 3
15	☾	4	18	19 6	25 5	4	46	18 10	24 9
16	T	5	15	19 0	24 11	5	45	18 4	24 3
17	W	6	14	18 10	24 9	6	44	18 4	24 3
18	Th	7	14	18 8	24 7	7	45	18 8	24 7
19	F	8	11	18 10	24 9	8	37	19 0	24 11
20	S	9	4	19 2	25 1	9	27	19 6	25 5
21	S	9	50	19 8	25 7	10	12	20 2	26 1
22	M	10	32	20 2	26 1	10	53	20 8	26 7
23	☉	11	14	20 8	26 7	11	33	21 2	27 1
24	W	11	53	21 0	26 11	...	...	...	...
25	Th	0	12	21 6	27 5	0	32	21 2	27 1
26	F	0	52	21 8	27 7	1	12	21 2	27 1
27	S	1	33	21 8	27 7	1	54	21 2	27 1
28	S	2	16	21 6	27 5	2	36	20 10	26 9
29	M	2	59	21 2	27 1	3	24	20 8	26 7
30	☾	3	49	20 10	26 9	4	15	20 4	26 3

JUNE

LOW WATER

Days of the month	Days of the week	A. M.			P. M.		
		Time	Depths of the annual	Depths of water South Quay Tidal Basin	Time	Depths of the annual	Depths of water South Quay Tidal Basin
		H. M.	Ft. in.	Ft. in.	H. M.	Ft. in.	Ft. in.
1	☾	11 8	5 1	28 1	11 42	5 5	28 5
2	T	... ..	... ..	... ..	0 16	4 11	27 11
3	W	0 51	5 1	28 1	1 27	4 5	27 5
4	Th	1 59	4 5	27 5	2 32	3 9	26 9
5	F	3 2	3 9	26 9	3 32	3 3	26 3
6	S	4 0	3 3	26 3	4 28	2 11	25 11
7	S	4 56	2 9	25 9	5 21	2 7	25 7
8	☿	5 47	2 7	25 7	6 13	2 7	25 7
9	T	6 38	2 7	25 7	7 3	2 9	25 9
10	W	7 27	2 9	25 9	7 49	2 11	25 11
11	Th	8 12	2 11	25 11	8 35	3 5	26 5
12	F	8 58	3 5	26 5	9 19	3 11	26 11
13	S	9 42	3 11	26 11	10 4	4 9	27 9
14	S	10 27	4 7	27 7	10 52	5 5	28 5
15	☿	11 18	5 3	28 3	11 46	5 9	28 8
16	T	... ..	... ..	... ..	0 14	5 7	28 7
17	W	0 44	5 11	28 10	1 14	5 9	28 8
18	Th	1 44	5 11	28 10	2 15	5 7	28 7
19	F	2 44	5 9	28 8	3 12	5 5	28 5
20	S	3 39	5 5	28 5	4 4	5 1	28 1
21	S	4 28	4 11	27 11	4 51	4 9	27 9
22	M	5 13	4 5	27 5	5 34	4 3	27 3
23	☉	5 55	3 11	26 11	6 16	3 11	26 11
24	W	6 36	3 7	26 7	6 55	3 9	26 9
25	Th	7 15	3 5	26 5	7 34	3 7	26 7
26	F	7 54	3 3	26 3	8 14	3 7	26 7
27	S	8 34	3 3	26 3	8 55	3 7	26 7
28	S	9 16	3 5	26 5	9 37	3 9	26 9
29	M	10 0	3 7	26 7	10 24	3 11	26 11
30	☾	10 49	3 9	26 9	11 15	4 1	27 1

JULY

HIGH WATER

Days of the month	Days of the week	A. M.			P. M.		
		Time	Depths of the annual	Depths of water Carnot Dock Lock sills	Time	Depths of the annual	Depths of water Carnot Dock Lock sills
		H. M.	Ft. in.	Ft. in.	H. M.	Ft. in.	Ft. in.
1	W	4 43	20 8	26 7	5 13	20 2	26 1
2	Th	5 45	20 6	26 5	6 17	20 0	25 11
3	F	6 51	20 2	26 1	7 27	20 0	25 11
4	S	7 59	20 2	26 1	8 33	20 4	26 3
5	S	9 7	20 6	26 5	9 37	20 10	26 9
6	M	10 7	21 0	26 11	10 36	21 6	27 5
7	☉	11 3	21 4	27 3	11 28	21 10	27 9
8	W	11 53	21 8	27 7	... ..	... ..	... ..
9	Th	0 16	22 2	28 1	0 39	21 10	27 9
10	F	1 0	22 2	28 1	1 21	21 8	27 7
11	S	1 41	22 0	27 11	2 0	21 4	27 3
12	S	2 19	21 6	27 5	2 37	20 8	26 7
13	M	2 56	20 10	26 9	3 15	20 2	26 1
14	T	3 35	20 4	26 3	3 55	19 6	25 5
15	☾	4 16	19 6	25 5	4 39	18 10	24 9
16	Th	5 2	18 10	24 9	5 31	18 3	24 1
17	F	6 1	18 3	24 1	6 34	18 1	23 11
18	S	7 8	17 11	23 9	7 45	18 1	23 11
19	S	8 18	18 3	24 1	8 50	18 8	24 7
20	M	9 20	18 10	24 9	9 47	19 6	25 5
21	T	10 12	19 8	25 7	10 35	20 4	26 3
22	W	10 57	20 6	26 5	11 18	21 2	27 1
23	☉	11 39	21 2	27 1	... ..	... ..	... ..
24	F	0 1	21 10	27 9	0 20	21 10	27 9
25	S	0 40	22 6	28 5	1 0	22 2	28 1
26	S	1 20	22 8	28 7	1 40	22 4	28 3
27	M	1 59	22 10	28 8	2 20	22 2	28 1
28	T	2 40	22 6	28 5	3 0	21 10	27 9
29	☾	3 23	21 10	27 9	3 46	21 2	27 1
30	Th	4 11	21 0	26 11	4 37	20 2	26 1
31	F	5 8	20 0	25 11	5 43	19 6	25 5

JULY

LOW WATER

Days of the month	Days of the week	A. M.			P. M.		
		Time	Depths of the annual	Depths of water South Quay Tidal Basin	Time	Depths of the annual	Depths of water South Quay Tidal Basin
1	W	11 43	3 11	26 11	... ..	... ..	... ..
2	Th	0 13	4 5	27 5	0 45	4 3	27 3
3	F	1 18	4 7	27 7	1 54	4 3	27 3
4	S	2 29	4 5	27 5	3 3	4 3	27 3
5	S	3 38	4 3	27 3	4 12	3 11	26 11
6	M	4 43	3 9	26 9	5 13	3 7	26 7
7	☾	5 41	3 5	26 5	6 8	3 3	26 3
8	W	6 33	2 11	25 11	6 57	3 1	26 1
9	Th	7 21	2 9	25 9	7 41	3 1	26 1
10	F	8 1	2 11	25 11	8 22	3 1	26 1
11	S	8 42	3 1	26 1	8 59	3 5	26 5
12	S	9 18	3 5	26 5	9 36	3 11	26 11
13	M	9 54	3 9	26 9	10 13	4 5	27 5
14	T	10 32	4 5	27 5	10 52	5 1	28 1
15	☾	11 13	5 3	28 3	11 36	5 9	28 8
16	Th	... ..	... ..	... ..	0 2	5 11	28 10
17	F	0 30	6 5	29 4	1 2	6 3	29 2
18	S	1 36	6 7	29 6	2 12	6 5	29 4
19	S	2 48	6 5	29 4	3 22	6 1	29 0
20	M	3 54	5 11	28 10	4 23	5 7	28 7
21	T	4 50	5 1	28 1	5 14	4 9	27 9
22	W	5 38	4 1	27 1	5 59	3 11	26 11
23	☉	6 22	3 7	26 7	6 42	3 5	26 5
24	F	7 3	2 11	25 11	7 23	2 11	25 11
25	S	7 42	2 7	25 7	8 1	2 9	25 9
26	S	8 21	2 6	25 5	8 41	2 7	25 7
27	M	8 59	2 6	25 5	9 20	2 9	25 9
28	T	9 40	2 7	25 7	10 1	3 1	26 1
29	☾	10 22	3 1	26 1	10 44	3 9	26 9
30	Th	11 10	3 11	26 11	11 38	4 5	27 5
31	F	... ..	... ..	... ..	0 10	4 9	27 9

AUGUST

HIGH WATER

Days of the month	Days of the week	A. M.			P. M.		
		Time	Depths of the annual	Depths of water Carnot Dock Lock sills.	Time	Depths of the annual	Depths of water Carnot Dock Lock sills
		H. M.	Ft. in.	Ft. in.	H. M.	Ft. in.	Ft. in.
1	S	6 19	19 2	25 1	7 2	19 2	25 1
2	S	7 45	19 0	24 11	8 25	19 6	25 5
3	M	9 4	19 6	25 5	9 38	20 4	26 3
4	T	10 9	20 4	26 3	10 36	21 2	27 1
5	W	11 2	21 2	27 1	11 24	21 10	27 9
6	Ⓜ	11 45	21 8	27 7	... ..	... ..	... ..
7	F	0 5	22 4	28 3	0 24	22 0	27 11
8	S	0 42	22 6	28 5	1 0	22 0	27 11
9	S	1 17	22 4	28 3	1 33	21 10	27 9
10	M	1 49	22 0	27 11	2 4	21 6	27 5
11	T	2 20	21 6	27 5	2 33	20 10	26 9
12	W	2 50	20 8	26 7	3 6	20 2	26 1
13	Th	3 24	20 0	25 11	3 41	19 2	25 1
14	Ⓜ	4 3	18 10	24 9	4 25	18 3	24 1
15	S	4 53	17 11	23 9	5 26	17 9	23 7
16	S	6 6	17 5	23 4	6 52	17 7	23 6
17	M	7 38	17 7	23 6	8 19	18 3	24 1
18	T	8 56	18 4	24 3	9 27	19 2	25 1
19	W	9 54	19 6	25 5	10 19	20 6	26 5
20	Th	10 40	20 10	26 9	11 2	21 8	27 7
21	Ⓜ	11 22	21 10	27 9	11 41	22 8	28 7
22	S	... ..	... ..	... ..	0 1	22 10	28 8
23	S	0 20	23 4	29 2	0 39	23 2	29 0
24	M	0 59	23 6	29 4	1 18	23 4	29 2
25	T	1 36	23 6	29 4	1 56	23 0	28 10
26	W	2 15	23 0	28 10	2 33	22 4	28 3
27	Th	2 56	22 2	28 1	3 17	21 2	27 1
28	Ⓜ	3 41	20 8	26 7	4 8	20 0	25 11
29	S	4 39	19 2	25 1	5 18	18 10	24 9
30	S	6 3	18 4	24 3	6 54	18 4	24 3
31	M	7 46	18 3	24 1	8 29	19 0	24 11

AUGUST

LOW WATER

Days of the month	Days of the week	A. M.			P. M.		
		Time	Depths of the annual	Depths of water South Quay Tidal Basin	Time	Depths of the annual	Depths of water South Quay Tidal Basin
		H. M.	Ft. in.	Ft. in.	H. M.	Ft. in.	Ft. in.
1	S	0 45	5 5	28 5	1 27	5 5	28 5
2	S	2 9	5 7	28 7	2 52	5 5	28 5
3	M	3 33	5 3	28 3	4 11	4 11	27 11
4	T	4 44	4 5	27 5	5 13	4 1	27 1
5	W	5 41	3 7	26 7	6 6	3 7	26 7
6	☾	6 27	3 1	26 1	6 48	3 1	26 1
7	F	7 7	2 9	25 9	7 25	2 11	25 11
8	S	7 43	2 7	25 7	8 0	2 9	25 9
9	S	8 16	2 7	25 7	8 32	2 11	25 11
10	M	8 47	2 11	25 11	9 2	3 3	26 3
11	T	9 16	3 5	26 5	9 33	3 11	26 11
12	W	9 48	3 11	26 11	10 3	4 7	27 7
13	Th	10 20	4 11	27 11	10 39	5 7	28 7
14	☾	11 0	5 11	28 10	11 25	6 7	29 6
15	S	11 55	6 11	29 10	... ..	... ..	... ..
16	S	0 31	7 3	30 2	1 14	7 3	30 2
17	M	2 0	7 3	30 2	2 44	6 11	29 10
18	T	3 25	6 5	29 4	4 1	5 11	28 10
19	W	4 30	5 3	28 3	4 58	4 9	27 9
20	Th	5 20	3 11	26 11	5 43	3 9	26 9
21	☉	6 5	2 11	25 11	6 24	2 9	25 9
22	S	6 43	2 4	25 3	7 3	2 4	25 3
23	S	7 22	1 8	24 7	7 41	1 10	24 9
24	M	8 0	1 6	24 5	8 18	1 10	24 9
25	T	8 37	1 8	24 7	8 56	2 2	25 1
26	W	9 14	2 4	25 3	9 34	2 9	25 9
27	Th	9 55	3 1	26 1	10 16	3 9	26 9
28	☾	10 42	4 3	27 3	11 9	5 1	28 1
29	S	11 44	5 9	28 8	... ..	... ..	... ..
30	S	0 26	6 3	29 2	1 13	6 7	29 6
31	M	2 5	6 5	29 4	2 54	6 3	29 2

SEPTEMBER

HIGH WATER

Days of the month	Days of the week	A. M.				P. M.			
		Time		Depths of the annual	Depths of water Carnot Dock Lock sills	Time		Depths of the annual	Depths of water Carnot Dock Lock sills
		H.	M.	Ft.	in.	H.	M.	Ft.	in.
1	T	9	8	19	2	25	1	20	2
2	W	10	6	20	4	26	3	21	2
3	Th	10	51	21	2	27	1	21	10
4	Fr	11	28	21	10	27	9	22	4
5	S	...	...	...	...	0	1	22	2
6	S	0	17	22	8	0	32	22	4
7	M	0	47	22	8	1	1	22	2
8	T	1	15	22	4	1	29	21	10
9	W	1	43	21	8	1	57	21	2
10	Th	2	11	21	0	2	26	20	6
11	F	2	40	20	2	2	57	19	6
12	Fr	3	16	19	0	3	37	18	6
13	S	4	3	17	11	4	34	17	7
14	M	5	17	17	1	6	8	17	5
15	T	7	4	17	5	7	51	18	1
16	W	8	31	18	4	9	4	19	6
17	Th	9	30	20	0	9	54	21	0
18	F	10	17	21	4	10	36	22	4
19	Fr	10	56	22	8	11	15	23	4
20	S	11	34	23	6	11	53	23	9
21	M	...	...	...	...	0	12	23	9
22	T	0	31	23	11	0	51	23	9
23	W	1	11	23	7	1	30	23	4
24	Th	1	52	23	0	2	11	22	6
25	F	2	32	21	10	2	56	21	0
26	Fr	3	21	20	2	3	51	19	6
27	S	4	24	18	8	5	8	18	4
28	M	6	0	17	11	6	53	18	4
29	T	7	45	18	3	8	25	19	2
30	W	8	59	19	2	9	26	20	4

SEPTEMBER

LOW WATER

Days of the month	Days of the week	A. M.			P. M.		
		Time	Depths of the annual	Depths of water South Quay Tidal Basin	Time	Depths of the annual	Depths of water South Quay Tidal Basin
		H. M.	Ft. in.	Ft. in.	H. M.	Ft. in.	Ft. in.
1	T	3 37	5 7	28 7	4 14	5 3	28 3
2	W	4 44	4 5	27 5	5 9	4 1	27 1
3	Th	5 32	3 7	26 7	5 53	3 5	26 5
4	⊙	6 12	2 11	25 11	6 29	2 11	25 11
5	S	6 46	2 7	25 7	7 2	2 9	25 9
6	S	7 17	2 6	25 5	7 31	2 7	25 7
7	M	7 46	2 6	25 5	8 0	2 9	25 9
8	T	8 14	2 9	25 9	8 27	3 1	26 1
9	W	8 41	3 3	26 3	8 54	3 7	26 7
10	Th	9 8	3 11	26 11	9 23	4 5	27 5
11	F	9 37	5 1	28 1	9 55	5 7	28 7
12	⊙	10 14	6 1	29 0	10 37	6 7	29 6
13	S	11 3	7 1	30 0	11 41	7 5	30 4
14	M	... ..	... ..	... ..	0 27	7 7	30 6
15	T	1 21	7 5	30 4	2 13	7 3	30 2
16	W	2 58	6 7	29 6	3 36	5 11	28 10
17	Th	4 6	5 3	28 3	4 33	4 5	27 5
18	F	4 57	3 7	26 7	5 17	3 1	26 1
19	⊙	5 38	2 7	25 7	5 57	2 4	25 3
20	S	6 17	1 8	24 7	6 36	1 6	24 5
21	M	6 55	1 2	24 1	7 14	1 4	24 3
22	T	7 33	1 2	24 1	7 53	1 4	24 3
23	W	8 12	1 6	24 5	8 31	2 0	24 11
24	Th	8 51	2 6	25 5	9 11	2 11	25 11
25	F	9 33	3 7	26 7	9 57	4 1	27 1
26	⊙	10 23	5 5	28 5	10 54	5 9	28 8
27	S	11 31	6 9	29 8	... ..	... ..	... ..
28	M	0 19	6 11	29 10	1 11	7 1	30 0
29	T	2 4	6 7	29 6	2 52	6 5	29 4
30	W	3 30	5 9	28 8	4 1	5 5	28 5

OCTOBER

HIGH WATER

		A. M.						P. M.					
Days of the month	Days of the week	Time		Depths of the annual		Depths of water Carnot Dock Lock sills		Time		Depths of the annual		Depths of water Carnot Dock Lock sills	
		H.	M.	Ft.	in.	Ft.	in.	H.	M.	Ft.	in.	Ft.	in.
1	Th	9	49	20	4	26	3	10	10	21	2	27	1
2	F	10	28	21	2	27	1	10	46	21	10	27	9
3	S	11	2	21	10	27	9	11	18	22	4	28	3
4	☾	11	32	22	2	28	1	11	46	22	6	28	5
5	M	...	...	...	...	...	...	0	1	22	4	28	3
6	T	0	14	22	6	28	5	0	28	22	4	28	3
7	W	0	42	22	2	28	1	0	56	21	10	27	9
8	Th	1	10	21	8	27	7	1	23	21	4	27	3
9	F	1	38	21	0	26	11	1	53	20	8	26	7
10	S	2	10	20	2	26	1	2	27	19	10	25	9
11	S	2	45	19	2	25	1	3	6	18	10	24	9
12	☾	3	33	18	1	23	11	4	5	17	11	23	9
13	T	4	45	17	5	23	4	5	36	17	9	23	7
14	W	6	29	17	7	23	6	7	16	18	6	24	5
15	Th	7	58	18	10	24	9	8	30	20	0	25	11
16	F	8	56	20	2	26	1	9	20	21	4	27	3
17	S	9	41	21	10	27	9	10	3	22	8	28	7
18	S	10	24	23	0	28	10	10	43	23	6	29	4
19	☉	11	3	23	7	29	6	11	23	23	9	29	8
20	T	11	43	23	9	29	8	...	...	...	...	...	...
21	W	0	5	23	9	29	8	0	26	23	7	29	6
22	Th	0	47	23	6	29	4	1	9	23	2	29	0
23	F	1	30	22	10	28	8	1	53	22	4	28	3
24	S	2	17	21	4	27	3	2	42	21	0	26	11
25	☾	3	9	20	0	25	11	3	41	19	10	25	9
26	M	4	17	18	8	24	7	4	59	18	10	24	9
27	T	5	46	18	1	23	11	6	32	18	8	24	7
28	W	7	16	18	4	24	3	7	54	19	4	25	3
29	Th	8	25	19	2	25	1	8	51	20	2	26	1
30	F	9	15	20	2	26	1	9	36	20	10	26	9
31	S	9	54	20	10	26	9	10	12	21	4	27	3

OCTOBER

LOW WATER

Days of the month	Days of the week	A. M.			P. M.		
		Time	Depths of the annual	Depths of water South Quay Tidal Basin	Time	Depths of the annual	Depths of water South Quay Tidal Basin
		H. M	Ft. in.	Ft. in.	H. M.	Ft. in.	Ft. in.
1	Th	4 27	4 5	27 5	4 50	4 3	27 3
2	F	5 10	3 7	26 7	5 29	3 7	26 7
3	S	5 46	2 11	25 11	6 3	2 11	25 11
4	☾	6 18	2 9	25 9	6 32	2 9	25 9
5	M	6 46	2 7	25 7	7 5	2 9	25 9
6	T	7 14	2 9	25 9	7 28	2 11	25 11
7	W	7 41	2 11	25 11	7 55	3 1	26 1
8	Th	8 8	3 5	26 5	8 22	3 9	26 9
9	F	8 36	4 1	27 1	8 52	4 5	27 5
10	S	9 8	5 1	28 1	9 25	5 5	28 5
11	S	9 45	6 1	29 0	10 7	6 7	29 6
12	☾	10 35	7 3	30 2	11 10	7 3	30 2
13	T	11 55	7 7	30 6	... ..	... ..	... ..
14	W	0 47	7 5	30 4	1 38	7 1	30 0
15	Th	2 23	6 5	29 4	3 1	5 9	28 8
16	F	3 32	4 9	27 9	3 58	4 1	27 1
17	S	4 20	3 3	26 3	4 43	2 11	25 11
18	S	5 5	2 6	25 5	5 25	2 2	25 1
19	☾	5 45	1 6	24 5	6 6	1 6	24 5
20	T	6 26	1 4	24 3	6 47	1 4	24 3
21	W	7 8	1 4	24 3	7 28	1 8	24 7
22	Th	7 52	2 0	24 11	8 11	2 6	25 5
23	F	8 32	2 11	25 11	8 55	3 3	26 3
24	S	9 19	4 1	27 1	9 45	4 7	27 7
25	☾	10 13	5 7	28 7	10 45	5 11	28 10
26	M	11 24	6 9	29 8	... ..	... ..	... ..
27	T	0 7	6 7	29 6	0 53	6 11	29 10
28	W	1 39	6 5	29 4	2 21	6 5	29 4
29	Th	2 56	5 7	28 7	3 27	5 5	28 5
30	F	3 52	4 9	27 9	4 15	4 7	27 7
31	S	4 36	3 11	26 11	4 53	3 11	26 11

NOVEMBER

HIGH WATER

Days of the month	Days of the week	A. M.			P. M.		
		Time	Depths of the annual	Depths of water Carnot Dock Lock sills	Time	Depths of the annual	Depths of water Carnot Dock Lock sills
		H. M.	Ft. in.	Ft. in.	H. M.	Ft. in.	Ft. in.
1	S	10 30	21 6	27 5	10 45	21 8	27 7
2	Ⓢ	11 0	21 10	27 9	11 15	21 10	27 9
3	T	11 31	22 0	27 11	11 46	22 0	27 11
4	W	... ..	... ..	... ..	0 1	22 0	27 11
5	Th	0 15	21 10	27 9	0 30	21 10	27 9
6	F	0 46	21 6	27 5	1 2	21 6	27 5
7	S	1 18	21 0	26 11	1 34	20 10	26 9
8	S	1 53	20 4	26 3	2 11	20 2	26 1
9	M	2 31	19 6	25 5	2 55	19 6	25 5
10	Ⓢ	3 20	18 8	24 7	3 51	18 10	24 9
11	W	4 26	18 3	24 1	5 8	18 8	24 7
12	Th	5 52	18 4	24 3	6 31	19 2	25 1
13	F	7 8	19 2	25 1	7 42	20 4	26 3
14	S	8 11	20 6	26 5	8 38	21 4	27 3
15	S	9 3	21 8	27 7	9 27	22 6	28 5
16	M	9 50	22 10	28 8	10 13	23 2	29 0
17	Ⓢ	10 36	23 4	29 2	10 59	23 4	29 2
18	W	11 21	23 6	29 4	11 45	23 4	29 2
19	Th	... ..	... ..	... ..	0 8	23 4	29 2
20	F	0 32	23 0	28 10	0 56	23 0	28 10
21	S	1 21	22 4	28 3	1 44	22 2	28 1
22	S	2 9	21 4	27 3	2 33	21 4	27 3
23	M	3 1	20 4	26 3	3 29	20 4	26 3
24	Ⓢ	4 0	19 2	25 1	4 33	19 6	25 5
25	W	5 9	18 8	24 7	5 47	19 2	25 1
26	Th	6 21	18 8	24 7	6 56	19 2	25 1
27	F	7 30	18 10	24 9	8 0	19 6	25 5
28	S	8 25	19 6	25 5	8 50	20 0	25 11
29	S	9 13	20 2	26 1	9 33	20 4	26 3
30	M	9 53	20 6	26 5	10 13	20 10	26 9

NOVEMBER

LOW WATER

Days of the month	Days of the week	A. M.			P. M.		
		Time	Depths of the annual	Depths of water South Quay Tidal Basin	Time	Depths of the annual	Depths of water South Quay Tidal Basin
		H. M.	Ft. in.	Ft. in.	H. M.	Ft. in.	Ft. in.
1	S	5 12	3 7	26 7	5 29	3 7	26 7
2	☉	5 44	3 3	26 3	5 59	3 3	26 3
3	T	6 16	3 1	26 1	6 31	3 1	26 1
4	W	6 46	3 1	26 1	7 0	3 3	26 3
5	Th	7 15	3 5	26 5	7 30	3 7	26 7
6	F	7 46	3 9	26 9	8 1	3 11	26 11
7	S	8 17	4 3	27 3	8 34	4 5	27 5
8	S	8 53	5 1	28 1	9 10	5 3	28 3
9	M	9 33	5 11	28 10	9 56	5 11	28 10
10	☾	10 23	6 9	29 8	10 55	6 9	29 8
11	W	11 32	6 11	29 10	...	...	...
12	Th	0 14	6 7	29 6	0 55	6 7	29 6
13	F	1 35	5 9	28 8	2 11	5 5	28 5
14	S	2 42	4 5	27 5	3 12	4 1	27 1
15	S	3 39	3 5	26 5	4 4	3 1	26 1
16	M	4 28	2 7	25 7	4 52	2 7	25 7
17	☼	5 15	2 2	25 1	5 39	2 2	25 1
18	W	6 3	2 0	24 11	6 26	2 0	24 11
19	Th	6 49	2 2	25 1	7 13	2 4	25 3
20	F	7 36	2 6	25 5	8 0	2 9	25 9
21	S	8 23	3 3	26 3	8 47	3 5	26 5
22	S	9 11	4 1	27 1	9 37	4 3	27 3
23	M	10 3	5 3	28 3	10 31	5 3	28 3
24	☽	11 2	6 1	29 0	11 36	5 11	28 10
25	W	...	...	...	0 12	6 7	29 6
26	Th	0 48	6 1	29 0	1 24	6 5	29 4
27	F	1 58	5 11	28 10	2 31	5 11	28 10
28	S	3 0	5 5	28 5	3 25	5 5	28 5
29	S	3 51	4 11	27 11	4 13	5 1	28 1
30	M	4 34	4 5	27 5	4 55	4 5	27 5

DECEMBER

HIGH WATER

Days of the month	Days of the week	A. M.			P. M.		
		Time	Depths of the annual	Depths of water Carnot Dock Lock sills	Time	Depths of the annual	Depths of water Carnot Dock Lock sills
		H. M.	Ft. in.	Ft. in.	H. M.	Ft. in.	Ft. in.
1	T	10 32	21 0	26 11	10 48	21 0	26 11
2	Ⓣ	11 6	21 4	27 3	11 24	21 2	27 1
3	Th	11 40	21 6	27 5	11 56	21 4	27 3
4	F	... ..	... ..	... ..	0 14	21 8	27 7
5	S	0 31	21 6	27 5	0 49	21 6	27 5
6	S	1 7	21 2	27 1	1 24	21 4	27 3
7	M	1 43	20 8	26 7	2 3	21 0	26 11
8	T	2 25	20 4	26 3	2 46	20 6	26 5
9	W	3 11	19 10	25 9	3 36	20 2	26 1
10	Ⓦ	4 5	19 6	25 5	4 35	20 0	25 11
11	F	5 9	19 4	25 3	5 43	20 0	25 11
12	S	6 17	19 10	25 9	6 51	20 4	26 3
13	S	7 22	20 4	26 3	7 56	20 10	26 9
14	M	8 25	21 0	26 11	8 54	21 6	27 5
15	T	9 22	21 10	27 9	9 49	22 0	27 11
16	W	10 18	22 6	28 5	10 44	22 6	28 5
17	Ⓜ	11 10	22 10	28 8	11 36	22 10	28 8
18	F	... ..	... ..	... ..	0 1	23 0	28 10
19	S	0 26	22 8	28 7	0 49	23 0	28 10
20	S	1 14	22 4	28 3	1 37	22 8	28 7
21	M	1 59	21 10	27 9	2 23	22 0	27 11
22	T	2 44	21 0	26 11	3 7	21 2	27 1
23	W	3 31	20 4	26 3	3 55	20 6	26 5
24	Ⓦ	4 18	19 6	25 5	4 45	19 8	25 7
25	F	5 14	18 10	24 9	5 44	19 0	24 11
26	S	6 13	18 8	24 7	6 48	18 8	24 7
27	S	7 20	18 6	24 5	7 53	18 8	24 7
28	M	8 22	18 10	24 9	8 50	19 0	24 0
29	T	9 18	19 4	25 3	9 42	19 6	25 5
30	W	10 5	20 2	26 1	10 27	20 2	26 1
31	Th	10 47	20 8	26 7	11 6	20 8	26 7

DECEMBER

LOW WATER

Days of the month	Days of the week	A. M.			P. M.		
		Time	Depths of the annual	Depths of water South Quay Tidal Basin	Time	Depths of the annual	Depths of water South Quay Tidal Basin
1	T	5 14	4 1	27 1	5 32	4 1	27 1
2	☾	5 49	3 11	26 11	6 8	3 9	26 9
3	Th	6 25	3 11	26 11	6 41	3 9	26 9
4	F	6 58	3 9	26 9	7 16	3 9	26 9
5	S	7 32	3 11	26 11	7 50	3 9	26 9
6	S	8 7	4 1	27 1	8 24	4 1	27 1
7	M	8 43	4 7	27 7	9 4	4 5	27 5
8	T	9 25	5 1	28 1	9 48	4 11	27 11
9	W	10 12	5 5	28 5	10 38	5 3	28 3
10	☾	11 5	5 7	28 7	11 38	5 5	28 5
11	F	... ..	... ..	... ..	0 10	5 7	28 7
12	S	0 44	5 1	28 1	1 19	5 3	28 3
13	S	1 52	4 7	27 7	2 25	4 7	27 7
14	M	2 57	3 11	26 11	3 28	3 11	26 11
15	T	3 58	3 5	26 5	4 25	3 5	26 5
16	W	4 55	3 1	26 1	5 21	2 11	25 11
17	☉	5 49	2 9	25 9	6 16	2 9	25 9
18	F	6 41	2 9	25 9	7 6	2 9	25 9
19	S	7 29	2 9	25 9	7 53	2 9	25 9
20	S	8 17	3 1	26 1	8 39	3 1	26 1
21	M	9 1	3 7	26 7	9 23	3 7	26 7
22	T	9 45	4 3	27 3	10 7	4 1	27 1
23	W	10 29	5 1	28 1	10 53	5 1	28 1
24	☾	11 17	5 9	28 8	11 45	5 7	28 7
25	F	... ..	... ..	... ..	0 13	6 3	29 2
26	S	0 43	6 1	29 0	1 15	6 7	29 6
27	S	1 50	6 3	29 2	2 22	6 7	29 6
28	M	2 55	6 1	29 0	3 24	6 1	29 0
29	T	3 53	5 9	28 8	4 20	5 7	28 7
30	W	4 44	5 5	28 5	5 7	5 1	28 1
31	Th	5 29	4 11	27 11	5 49	4 5	27 5

HIGH WATER TABLE

Showing the difference of Time of High Water between Calais and the following Ports.

To find the time of High Water at the following places, add and subtract the number in the Table, according to the direction stated, to or from the time of High Water at Calais, as given in the Calendar for the day required.

A. Add. — S. Subtract

		H. M.			H. M.
Amsterdam	A	15 34	Hamburg	A	17 44
Antwerp	A	4 49	Havre	S	2 »
Bordeaux	S	5 »	Honfleur	S	2 20
Boulogne	S	0 25	Liverpool	S	0 30
Brest	S	8 05	London	A	2 40
Bristol	S	4 40	Lorient	S	8 17
Cherbourg	S	3 50	North Foreland	S	0 5
Cork	S	7 23	Ostend	A	0 44
Dieppe	S	0 40	Portsmouth	S	8 10
Dover	S	0 25	Rochefort	S	7 43
Dublin	S	0 13	Rotterdam	A	4 »
Dungeness	S	0 25	St-Malo	S	5 40
Dunkirk	A	0 24	Sunderland	A	3 34
Flushing	A	1 24			

The Time shown in the tide table of this annual is French time (Paris Meridian) : to know local time, subtract 2 minutes from Paris time.

French time is 9 minutes 20⁶ seconds in advance of English time (Greenwich Meridian).

CALAIS

Calais, a maritime town and fortified place, is situated on the Straits of Dover (alias Straits of Pas-de-Calais), at the entrance of the North sea in $50^{\circ} 57' 45''$ North latitude and $0^{\circ} 29' 2''$ West longitude, position of the lighthouse, Paris Meridian. This town is 20 miles from Boulogne — 80 miles from Arras — 65 miles from Lille — 168 miles from Paris and 21 miles from Dover.

Its population within its fortifications, inhabitants of suburbs not reckoned, amounts to 72,000 inhabitants or thereabout.

In 1875, the French Government sanctioned a scheme for the building of a modern port at Calais, on the East side of the old one.

The works for the extension and improvement of the Port of Calais, consisting firstly in the construction of a new floating dock and the extension of the tidal basin were commenced in 1877, and completed in the spring of 1889. These works were opened on the 3rd June 1889 by the late President Carnot.

The scheme comprised also the shifting of the Eastern jetty so as to give to the entrance of the port a width of 430 english feet.

The building of the new pier experienced some delay arising from difficulties met with in the sinking of the "caissons" constituting its foundations. This last work

has been entirely completed in 1896 and its completion has placed Calais amongst the foremost of the Northern ports of the Continent.

The distance, between France and England, via Calais, being shorter than by any other route, renders it the most important for passengers and “grande vitesse” goods, and its new floating dock will enable it to regain the importation of heavy goods of all sorts, which its old floating dock, (established in 1842), was not able to maintain. In fact the port of Calais will now benefit by the natural advantages it enjoys :

Firstly. — From a maritime point of view, by the depth and breadth of its channel and its extensive tidal basin in which the largest vessels can manœuvre without difficulty **and even remain afloat at low water and under any conditions of tide.**

Secondly. — From a commercial point of view, by its geographical position which shows it to be the port for the requirements of the North of France, also its numerous and express connections by rail with all parts of the Continent and its canals in direct communication with the entire canal system of France.

Thus Calais which, even now, is a large manufacturing town by the high rank of its lace industries, is now recovering its name as a Sea-port, and is destined to see its population increase rapidly, and to become one of the first centres of the North of France.

The aim of this sketch is to sum up briefly the actual condition of the port of Calais.

The following particulars prove that, for a “grande

Vitesse" service between England and the Continent, Calais is the port required ; as a port of importation for all sorts of goods used by the manufacturing districts of the North and North East of France, Calais to day fears no comparison.

The easy and express connections with all parts of the Continent make one hope without fear on contradiction that Calais, will be able to compete successfully with the foreign ports along the North Coast, and will thus have before it a future of magnificent promise.

The West Dock was opened to navigation in 1907.

Numerous vessels have already used that the dock to land their cargoes of timber of petroleum or of coal.



STEAMERS

Steam-packet service between France and England

Calais is 21 miles distant from the English coast and is the port of registry in France for the steamers of the French Mail service between France and England.

It is also the starting point of all international trains and particularly of trains named "Luxe services" in connection with these steamers.

The depth of water in the channel and tidal basin allows the steamers to come alongside at any hour, whatever may be the state of the tide.

The increase in the number of passengers taking the Calais route between France and England is, of course, the logical and natural consequence of its position, which makes it the nearest point off the English coast and of the particularly favourable conditions of the entrance of the port.

The following table gives the number of passengers between France and England in the previous years.

Between Calais and Dover.

1890	265.227 passengers.	1902	306.154 passengers.
1891	266.283 »	1903	309.677 »
1892	248.983 »	1904	298.900 »
1893	236.234 »	1905	325.524 »
1894	236.824 »	1906	339.209 »
1895	254.262 »	1907	353.992 »
1896	265.560 »	1908	379.596 »
1897	270.512 »	1909	351.061 »
1898	279.352 »	1910	369.096 »
1899	261.420 »	1911	363.461 »
1900	316.156 »	1912	390.906 »
1901	308.801 »		

MAP OF EUROPE

London in connection, via Dover-Calais, with Capitals
and principal Towns on the Continent.

Shortest sea passage between England and the
Continent.

International and Express Services.





In the year 1904, the number of passengers shows a falling off doubtless mainly attributable to the cessation of trips of the favourite excursion boat "La Marguerite", which for a number of years had, during the summer months, carried passengers from London to Calais and back in the day.

Regular lines of steamers

The fusion of the South-Eastern and the London Chatham Railway Companies was some years ago an accomplished fact.

From Calais to London and vice-versa, via Dover there are four departures a day for passengers, at fixed hours, and one a day for merchandise.

The steamers are, at Dover, in connection with the London Chatham Railway line and the South-Eastern Railway line.

The following ships compose part of the fleet running the passenger and mail service between Calais and Dover.

The "Queen", "Invicta", "Onward", "Victoria", "Empress", "Riviera" and "Engadine" turbine steamers in daily service.

This large and fast steamers, have very fine saloons, magnificently furnished and upholstered, fitted with electric light and all the most modern appliances for a first class cross-channel passenger service. They have saloons below, forward and aft, also private saloons on deck, with promenade deck.

Every attention has been given to the comfort of passengers.

The turbine steamer, "The Queen", was built, in 1903, by Messrs Deny Brothers, of Dumbarton, to the order of the S. E. and Ch. R. C^o for their Dover-Calais service. She is 310 feet long, her beam measurement 40 feet, her gross tonnage 1676 tons and net 345 tons, with draught of water 10 feet 3 in. She has a Board of trade certificate for 1.250 passengers. She is provided with every up to date comfort and convenience for the passengers; there are over twenty private cabins. She generally makes the passage in 50 minutes.

The "Queen" began to run the passenger service between Dover and Calais in June 1903 and she met such popularity with passengers that two new boats of similar construction were ordered so that a daily turbine service may be ensured for both the Calais and Boulogne routes.

The six new turbine steamers the "Onward", the "Invicta", the "Victoria", the "Empress", the "Riviera" and the "Engadine" were delivered the two first in 1905 two others in 1907 and the last in 1911.

They alternately run the Dover-Calais service and the Folkestone-Boulogne one.

The change has brought about a revolution in cross Channel travelling and secure to this route a still greater patronage in the first class travelling public who demand the maximum of comfort and convenience.

The contract of the London, Chatham and Dover Railway Company with the French Government for the conveyance of the French Mails expired in October 1896.

The Northern Railway of France obtained the con-

cession which could not have passed into better hands, or of any Company possessing such facilities for the proper performance of the service.

The two magnificent paddle boats steamers ordered at the "Chantiers de la Loire" by the Northern Railway C^o have respectively been christened "Nord" and "Pas-de-Calais". The "Nord" has been placed on the service in the beginning of October 1898, her sistership "Pas-de-Calais" followed a little later on.

Their principal dimensions are as follows: length between perpendiculars 338 ft.; beam 34 ft. 9 in; width outside paddle-boxes 68 ft. 3 in; depth of hull below normal water-line 9 ft. 0 $\frac{1}{4}$ in; depth of hull 16 ft. 3 in; tonnage 1.700.

The engines of these ships are specified to develop 7.000 horse-power and to give a speed of 23 knots.

The "Nord" and "Pas-de-Calais" are magnificent vessels, quite palatial in their provision for the comfort of passengers. They have a main deck with a promenade deck above and a partial lower deck. Beyond the stairways which lead to the promenade deck on those going to the ladies saloon is a series of well-fitted private cabins as well as two special state-rooms separated from each other by a moveable partition as is done in the state-cabins of the new South Eastern and Chatham and Dover Company's steamers; on the new French steamers these state-cabins are provided with beds.

A very excellent arrangement has been made for dealing with both passengers' luggage and mails. Electric cranes and elevators have been erected at

Calais and Dover for the shipping and unshipping of luggage and mails in cases or crates.

This method of transhipment has naturally caused a very important economy of the time formerly taken when men had to deal with the luggage and mails one package at a time; the saving of time so obtained is at least 20 minutes on the journey between Paris and London.

There are many routes between England and the Continent, but undoubtedly the most popular is that of Dover and Calais; considering the rapidity of the sea passage, this route is well suited to the needs of invalids and bad sailors. The advantages to the travelling public by these services is very considerable. The average sea passage for steamers is 50 minutes.

The cargo-boat flotilla belonging to the South Eastern and Chatham Railway Company and running between Calais and Dover consists of:

Maidstone,	gross ton.	539	net	211	R H P	52
Canterbury,	» »	561	»	114	N H P	88
Deal,	» »	572	»	235	R H P	104
Achille Adam,	» »	460	»	212	N H P	107
C-W Eborall,	» »	452	»	217	N H P	124

The "Canterbury", a twin-screw, added to the flotilla in January 1901, has been built somewhat of the lines of the "Maidstone", only she is larger and she has excellent accommodation and convenience for transporting the weekly Indian Mails and the limited number of homeward Indian passengers. This vessel is the first-screw steamer placed on the service.

The other lines of steamers are as follows :

From Calais to London direct : via Thames, Vendroux line, two departures a week (cargo-boats).

From Calais to Leith direct, Gibson line (cargo boats) weekly service.

Extra steamers are placed on all these lines when required.

Cargo-boats plying regularly between Calais, London and Leith are berthed in the tidal basin or in Carnot dock opposite the sheds belonging to the Chamber of Commerce, where the goods can be stored to await, in case of need, the arrival of the steamers.

The berth for the Dover cargo-boats has been changed from the old tidal quay to the more commodious one on the South side of the new tidal basin, opposite Paul Devot shed — It enables the steamers to remain afloat at all hours, and arrive and leave at any state of the tide: they also benefit by the hydraulic cranes placed there for the working of cargoes.

The Northern of France Railway Company have a line of rails laid to the place where the steamers are berthed so that the goods entrusted to these lines of steamers can be safely and quickly despatched to their destination.

Every facility and accommodation will be given to Shipowners or Companies organising steamship lines having Calais for their point of arrival and departure or choosing it as a port of call.

Situation of the Port : tidally

It is high water, at Calais, on the days of Full and Change of the Moon, at 11 h. 49., Greenwich Mean Time.

Spring tides rise 37 ft. 9 in. (1)

Neap tides rise 33 ft. 5 in.

It is to be remarked that the tides rise higher in the harbour with strong winds from N. W. to S. W. W. than they do with those from E. to S. S. E.

The mean duration of the flood stream at springs, in front of the entrance, is $5\frac{1}{2}$ hours, and of the ebb $7\frac{1}{4}$ hours. At half a mile outside the piers, the flood runs $2\frac{1}{2}$ or 3 hours after high water in the harbour and with strong westerly winds $3\frac{1}{2}$ or $4\frac{1}{2}$ hours; with easterly winds it continues only $1\frac{1}{2}$ or 2 hours. The rate of the flood at great springs is 4 knots. The slack at high water springs lasts about 20 minutes; at neaps it often lasts about $1\frac{1}{2}$ hour.

Both the harbour and floating basins are well sheltered from wind and sea, but a swell runs into the entrance channel from half-flood to half-ebb when it blows strong from the northward or eastward.

		Spring tides :			
(1) Depth of water at Pier head.	}	Above French Marine chart datum	22 ft. 10	}	= 37 ft 9 in
		Below " " " "	11 " 11		
		Neap tides :			
		Above French Marine chart datum	18 ft. 6		
		Below " " " "	14 " 11		= 33 ft 5 in
(For further explanation see item Inner Channel).					

Prevailing Winds

The variations of the winds in the latitude of Calais are characterized by the frequency of the West to South-West winds, as has been stated in the last issues.

The following table shows the result of three nightly observations of the direction of the wind during the years 1892 to 1898. These records being taken nightly viz: at 9 P. M., Midnight and 3 A. M., from the lighthouse's observatory have given the following results :

WIND	1892	1893	1894	1895	1896	1897	1898
N.	60	91	94	49	99	81	105
N. W.	134	63	56	103	88	68	58
N. E.	166	160	145	107	118	130	116
E.	137	126	138	173	157	153	73
W.	106	108	92	126	247	191	191
S.	95	105	126	83	134	218	152
S. W.	264	359	343	338	176	151	269
S. E.	136	82	100	116	79	103	133

Position of the Port

Calais Harbour is situated, as aforesaid, on the Straits of Dover (or Straits of the Pas-de-Calais), at the entrance of the North Sea — It lies at a distance of about 11 miles, North East by East $\frac{1}{4}$ East, from Cape “Gris-Nez”.

Branches of the Northern Railway Company connect this port with Lille and Brussels on the one side and with Boulogne and Paris on the other side.

The Calais Canal connects the Port with all the French Canal system.

Lights

Cape Gris-Nez. — The lighthouse, a circular brick tower 79 feet high, erected over a rectangle-shaped building, stands at the extreme point of the Cape. — Position: latitude $50^{\circ} 52' 10''$ N., longitude $1^{\circ} 35'$ E. (Greenwich Meridian).

The Cape Gris-Nez's revolving light of the first order, which formerly used to exhibit, 226 feet above the level of high water, three white flashes and a red one, has lately been replaced by a much more powerful electric light with a regular white flash every five seconds. This new light has a candle power ranging from 1,500,000 to 3,000,000: this being regulated according to the state of the atmosphere; it is visible at a distance of 48 miles in clear weather and 16 miles when it is foggy.

Fog Signal. — During fog or thick weather a fog horn (syren) is sounded. It gives a blast of 3 seconds every minute.

A Semaphore or signal station is established near the lighthouse.

By using the commercial Code of Signals passing vessels requiring Calais steam-tugs' assistance, can communicate with this semaphore and by this means a telegraphic message may be sent, free of charges, to the Calais steam-tug Department.

Calais lighthouse.—This lighthouse (a brick octagon shaped building) stands at the North East side of the town and exhibits, at 190 feet above high water level, an electric white light showing successive groups of four white flashes. The interval between two consecutive groups being three times as long as the interval between the flashes of each group. This light is of the first order and visible about 24 miles.— Position: $50^{\circ}57'$ northern latitude and $1^{\circ}51'$ eastern longitude (G. M.)

Walde's Point Light. — An iron beacon standing on the extreme edge of the sands, about a mile from the shore, $3\frac{1}{4}$ miles E. N. E. from Calais lighthouse. This light has, in July 1897, been altered from red and white alternately to a group flashing white light showing 3 flashes in quick succession in each group. The period of the light varies from 5 to 10 seconds, but the proportion of time occupied by the eclipses in each group being always $\frac{1}{3}$ of the time occupied by the eclipse between each group.

This light, $34\frac{1}{2}$ feet above the level of high water, is visible 11 miles. — Position: latitude $50^{\circ}59'47''$ N. longitude $1^{\circ}55'4''$ E. (G. M.)

Approaches to Calais

Calais channel owes its origin to the drainage of waters from the interior and is now deepened and maintained in a good state by flood sluices and dredgers ; it has below the level of low water of ordinary spring tides 14 ft. 11 in. at Pier-head and in the quarter within the jetties, and 16 ft. 1 in, at their extremities.

To the Eastward, 1 $\frac{1}{4}$ mile from the channel and as far as Walde's point, the strand has an extent of about 1430 to 1960 yards with a declivity of $\frac{3}{8}$ to $\frac{5}{8}$ of an inch between the strand of the lowest of spring tides and that of the highest of neap tides, and with a declivity by far less from $\frac{4}{10}$ to $\frac{3}{32}$ of an inch in the upper zone comprised between the strand of high water of neap and spring tides.

To the Westward of the channel, a very extensive strand, about 1.000 yards in width, is to be found, which is rapidly reduced when Sangatte and Blanc-Nez cliffs, ending the chain of hills of the lower Boulogne district, are neared ; before Sangatte its width is about 550 yards.

Beyond the jetties, the gradient of $\frac{5}{8}$ of an inch extends to deep water, of over 33 ft. in depth at low water, which forms the Calais roads.

At night, the lighthouses of Cape Gris-Nez and of Calais show the necessary marks to keep clear of the banks off the coast and the shoal water of the "Calais Riden", (sand bank), over which there remain, at least, 26 ft. of water at low tide.

The Walde's Point lighthouse marks the extreme point of the Eastern shore.

Roads and Outer Channel

Calais roads, an open roadstead with deep water over 33 ft. in depth at low tide, comprises the space situated between the sandy flat shore to the Westward of Calais and the "Calais Riden" (a sand bank), over the highest part of which there remain at equinoctial low tide 21 ft. of water. At the distance of about one mile N. W. off the mouth of the channel, are situated the "Ridens of the road" (sand bank) over which there is, at least, a depth of 26 ft. of water at low tide.

Vessels arriving in the outer channel before the time due for the opening of the dock gates find in these roads a safe shelter.

The bottom is of sand with broken shells, but beneath this there is good holding ground, which the anchors of large ships penetrate, so that ship anchoring on the south edge of the "Riden" will ride out a N. W. gale.

Moreover, no lightening or transhipment need be made in the Calais roads, the entrance of the port being always practicable to the largest vessels whatever may be the time of high tide.

An extract of the marine chart, n° 3402, of the French marine charts and plans Department, has been added to the present annual; it gives the depths of water of the roads and of the access to Calais Harbour. The depths are expressed thereon per metre (one metre is equal to 3 ft. 3 in.

The outer channel beyond the jetties is kept deep by dredgers, it takes the shape of a fan, the sides of which form with the line of the jetties an angle of about 45°

In the whole extent of this channel, there exists a minimum depth of 16 feet of water below low water of ordinary spring tides.

Inner Channel and Sluicing Basins

The construction of the new breakwater pier on the East side of the harbour has been completed entirely in September 1896 and the remains of the old one have been cleared away. The new entrance has since then been opened to shipping.

The actual inner channel, lying between two jetties running nearly in a parallel line N. W. and E. E., gives now an entrance of 430 English feet in width and much more width within (*see plan of the port*), so that a vessel entering in severe weather would, if needed, find ample room to “recover” herself with the helm after passing the pier-head.

By means of the combined actions of dredgers and of sluicing basins, the depth of the channel is maintained at 14 ft. 11 in. at the lowest water of spring tides, whatever may be the direction and force of the wind.

The depth of water is, at the pier-head, 37 ft. 9 in. at ordinary spring tides, and 33 ft. 5 in. at ordinary neap tides.

This depth will permanently be maintained.

The dredging service is carried on by means of three powerful suction dredgers.

The sluicing plan consists of:

1° One sluicing basin, to the Eastward, having an area of 250 acres and a flood gate 100 ft. in width.

2° One sluicing basin, to the Westward, having an area of about 188 acres and a flood gate 59 ft. in width.

The volume of water that can be stored at high tide in these two scouring basins is about 80,600,000 cubic feet and this quantity can be discharged through the sluicing gates with a fall varying from 20 to 13 feet during about three quarters of an hour at each tide.

The dredgers having virtually superseded the use of these basins, the Authorities of the port contemplate eventually turning them both into additional wet docks.

TIDAL BASINS

Tidal Basin to the Eastward

This tidal basin has a breadth of 558 ft. **Its North quay** has a length of 1,800 ft. it is specially designed for the steam packet service between Calais and Dover. The depth of water, at high tide, of spring tides, is 37 ft. 9 in. and 33 ft. 5 in. of neap tides, at low water spring tides there remains an uniform depth of water of 14 ft. 11 in.

Its quay space is entirely occupied by the Pier Station and a Buffet, surmounted by the "Terminus Hotel".

With these depths of water in the channel and the tidal basin, the service of the channel packets between France and England can be carried out at the North

quay at all hours and under all conditions of tide : **no other port on the Continent can give these advantages added to that of being the nearest in distance and time to England.**

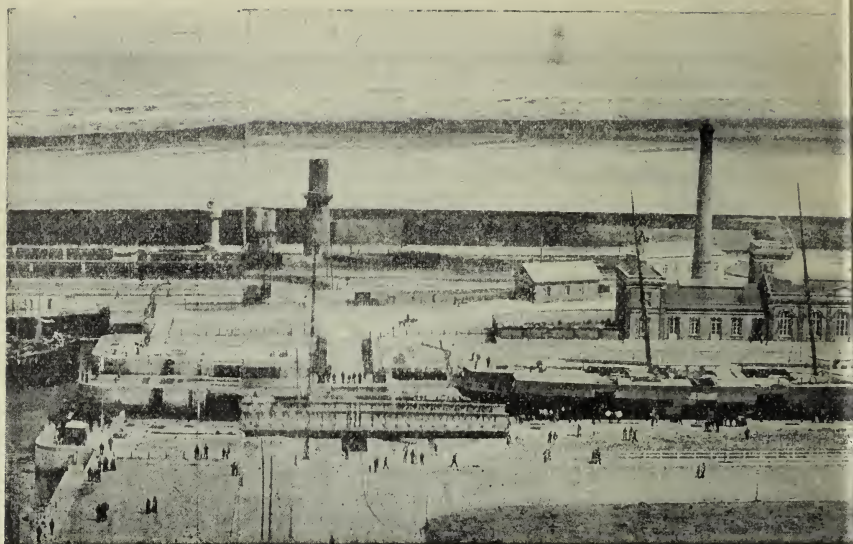
Four spacious landing stages for embarking and disembarking, a most extensive Terminus Station and numerous connecting lines of rail have been provided to utilise to the utmost the advantages offered and to make Calais the starting point of all the international trains which put England in express communication with all the Capitals of Europe. Calais is thus within three hours from Paris, London and Brussels.

Merchandise requiring quick despatch or being of a fragile nature as also all samples which the necessities of commerce command to be forwarded without loss of time, must naturally use the shortest route, via Calais and Dover.

Its South quay has a length of 820 ft. The depth of water at spring tides is 46 ft. and 41 ft. 8 in. at neap tides. **At low water of spring tides there remains a depth of 26 ft. 3 in.**

The South quay of this tidal basin with its depth of water of 26 ft. 3 in. permits equally to over-sea trading steamers to discharge and load during the interval of two tides, without entering the docks, consequently to work to advantage at Calais during a stay of only a few hours. Sheds of 525 ft. in length by 130 ft. in breadth, erected along the length of this south quay, which is furnished also with travelling hydraulic cranes will facilitate these operations.

At this tidal basin, merchandise can either be loaded direct on to waggons or discharged over the side into



CARNOT D
4 masted British steamer "Europe", of Liverpool, 5302 tons



Fournier shed

CARNOT



DOCK SLUICES

register, 435 feet in length, in the sluice 68 ft. 4 in. in breadth



DOCK

Fodder shed

lighters, or canal boats, or else landed and warehoused in the sheds belonging to the Chamber of Commerce.

Tidal Basin to the Westward

The tidal basin to the Westward also offers to commerce extensive ground space, on the quays of which merchandise, such as coal, pig iron, wood, etc., can be stored free of charges for a considerable time.

The quays of this tidal basin which is used as a tidal harbour, and those of the tidal basin called "Petit Paradis" have an area of 1,800 square yards.

The depth of water at spring tides is 29 ft. 5 in. and at neap tides 25 ft. 2 in.

Floating Docks

The port of Calais has two floating docks :

One to the Eastward "Carnot Dock" and one to the Westward "West Dock".

1° Eastern Dock : Carnot Dock

The dock to the Eastward communicates with the tidal basin by two locks of equal length but unequal width. The wider has a clear width of 68 ft. 4 in. Gate chambers are formed in the masonry to receive one pair of gates at the upper end of the lock, two pairs of gates at the lower end one pair in the middle : the first pair serve as flood gates, and the other three pairs as ebb gates. The gates are so placed as to give a maximum clear length of 436 feet.

The narrower lock is 46 ft; 2 in. in width, and is also provided with four pairs of gates, which are so arranged as to give a maximum clear length of 451 ft. 3 in.; this length can be divided into two unequal lengths by means of the intermediate gates.

The level of the lowest part of the invert is 5 ft. 11 in. below the French marine chart datum.

The depth of water on the lock sills is 28 ft. 8 in. at ordinary spring tides and 24 ft. 5 in. at neaps. Under these conditions, even the largest vessels, with a less draught, than 26 ft. 3 in. of water arriving at spring tides will enter the dock at once, or if arriving at neap tides can berth at the deep water quay of the tidal basin and commence discharging forthwith entering the dock in due course.

The area of this dock is about 23 acres, and the area of the quays is 181.000 square yards. Length of quays 6.393 ft.

Sheds of 130 ft. in breadth with overhanging roofs on either side are erected along the West quay of this dock for a length of 1310 feet.

Eight lines of rails connected by numerous points run parallel to the side of the dock both on its East and West sides, and gives facilities for unloading waggons of merchandise with the greatest despatch.

A railway for a travelling crane laid down the whole length of the quays and a plant consisting of hydraulic cranes and hydraulic jiggers exists for the use of vessels.

The sheds, cranes, and jiggers are worked by the Chamber of Commerce.

There is besides, on the East quay, an hydraulic crane of 40 ton-power, which is provided with

necessary implements to enable coals to be loaded by entire waggons.

Besides this, there is, all round the dock, extensive ground available for the erection of warehouses, the establishment of vaults for the housing of wines and spirits under bond and stores of all sorts, timber yards, manufactories and industrial works in connection with the shipping and trade of the port, some portion of this ground is retained by the Chamber of Commerce who have the right to cede the grant of it.

It is thus seen that nothing is wanting in the East dock for all requirements of a ship, the best means and methods are employed for working cargoes, for filling coal bunkers economically and quickly and for enabling ships to make their necessary repairs.

A broad slope has been established at the Southern end of this dock which enable complete truckloads of goods on rafts to be landed or shipped, also landing of timber, etc.

2° Western Dock

The West dock was up to date a more difficult one to turn to advantage, the level of its lock sill being placed too high for vessels of deep draught.

The Chamber of Commerce submitted several years ago to the approval of the Government a plan for improving and extending the area of the dock and constructing a new and deep entrance some distance eastward in the tidal basin.

From one cause or another the plan was only sanctioned, on the 26th July 1901 and the works were

commenced at the end of 1901 by the Engineers of the port.

The new lock is 55 ft. 10 in. in width and the sluice 137 ft. 8 in. in length with a depth of water on sill of 29 ft. 5 in. at ordinary spring tides and 25 ft. 2 in. at ordinary neap tides. The tidal basin and the dock will be dredged accordingly. A revolving bridge affords direct access to the sea front and Casino.

The lock and bridge are worked by hydraulic power. These works are now completed.

This old dock is equally well supplied with railroads running the length of the quays. The exceptional position of this dock, more especially at its extreme end, isolated as it is from the town, far from any buildings, bounded on one side by a sluicing basin and on the other by military earth-works, renders it eminently suitable for the trade of dangerous cargoes. It is impossible to find, in the North, any port where the chances of accident from such a cause would be so reduced.

Special facilities are afforded for the discharge of petroleum in bulk at the rate of 230 tons an hour.

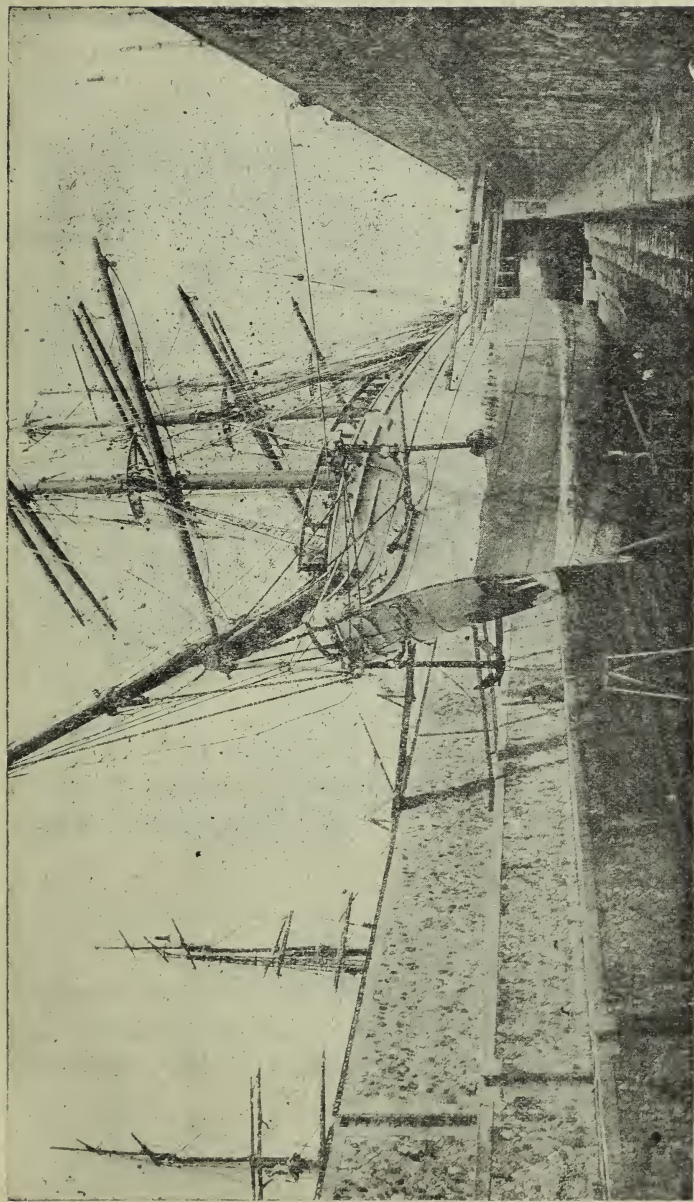
Numerous vessels have already used that dock to land their cargoes of timber, of petroleum or of coal.

Dry Dock (1)

At the Southern end of the Eastern dock, or "Carnot Dock", exists a dry dock which can be used by the largest vessels.

(1) Depths of water on sill

(Spring tides 28 ft. 8 in.
 Neap tides 24 ft. 5 in.



The iron bark "Ben Voirlich" 1540 tons register, 255 ft. 6 in. in length in the DRY DOCK

1° This dry dock has the following dimensions :

Breadth at the entrance	69 ft.
Length on blocks.	426 »
Length at half-height	500 »
Level of the sill at the entrance	} 5 ft. 11 in.
below French Marine chart	
datum	

Its width was determined upon with a view to receiving the largest paddle-wheel steamers likely to be employed on the channel service.

The tops of the blocks are level with the lock sills of Carnot dock.

The pumping machinery is capable of emptying the dock in less than three hours under the most unfavourable conditions.

Electric lights have been fitted round the dock, so that vessels can be docked and work carried on at night if required.

A hand-crane, 3 ton-power, is established on one of the quays of the dock.

Ground space has been reserved for the establishment of two other graving docks.

Canal Dock

Between the East and West docks, a very extensive canal dock exists, which communicates by means of the Calais canal, with all the internal navigation of the Continent.

This canal dock has a superficial area of 10 acres and a quay frontage of 5.250 ft.

It thus allows lighters or canal boats, which may

contain goods for shipment on vessels, to remain here waiting for orders without being any hinderance to navigation.

Broad slopes are erected at various parts along the side of the quay which enable complete truckloads of goods to be rafted.

It may here be remarked that since the construction of the Elevator at Fontinettes, near St-Omer, the largest sized canal boats 300 tons can now reach Calais.

This tonnage is the heaviest than can be accommodated by the waterways in the North of France and between Belgium and Paris.

This canal dock communicates with Carnot dock by two locks 19 ft. 8 in. in width and 236 ft. 6 in. in length and with the West dock by a lock 17 ft. 1 in. in width and 230 ft. in length.

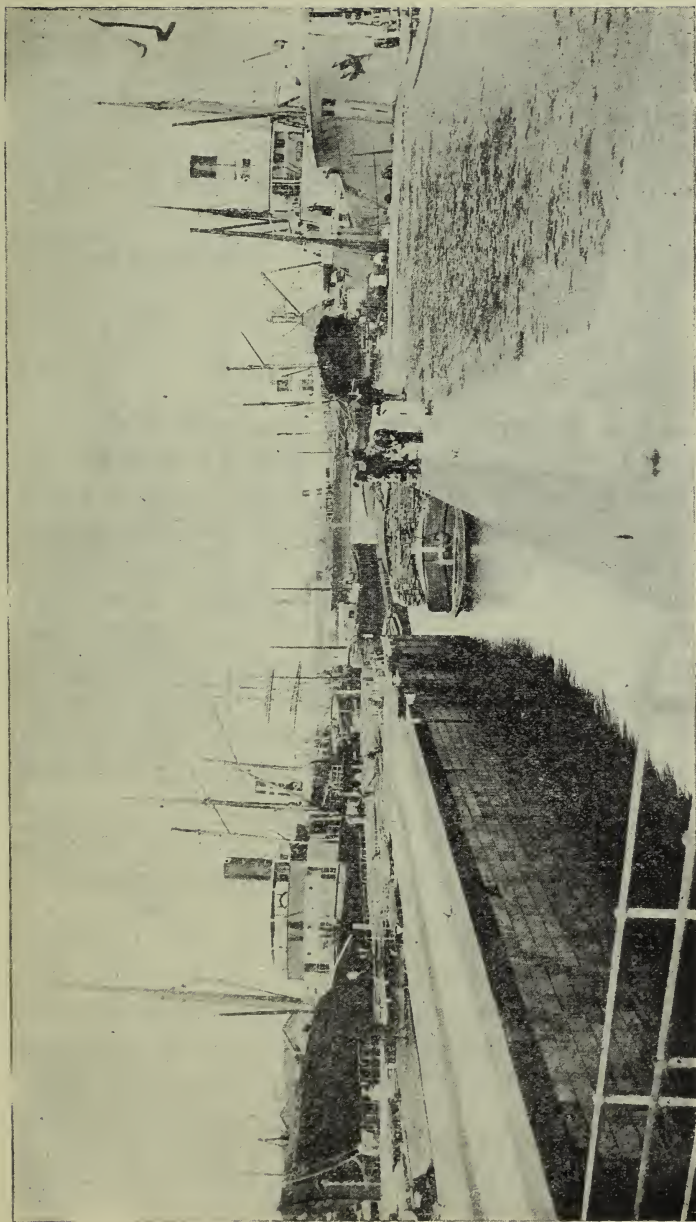
Towage

The towing service is under the management of the Chamber of Commerce, and the steam-tugs belong to that Body.

The service is performed by two powerful steam-tugs and a steam-launch; this launch being used to assist vessels in shifting their berths in the inner harbour or docks.

One of these tugs, named "Calaisien", is a twin-screw, of 650 horse-power, and the other, named "Champion", of 500 horse-power with salvage powerful pumps.

The tugs are always kept with steam up and ready to give assistance whenever required.



CANAL DOCK SLUICES -- INNER BASIN

They are suited for assisting vessels in a disabled condition and attending wrecks; they are each provided with a life saving apparatus presented by “La Société Centrale de Sauvetage des Naufragés, de Paris”.

The number of tugs will be increased, should it be deemed necessary.

Hydraulic Machinery

Hydraulic Machinery is employed for all purposes where power is required, such as working sluices, lock gates, bridges, capstans and also cranes and jiggers belonging to the Chamber of Commerce.

The power is distributed from a central station established on the North side of the locks of the new wet dock.

The central hydraulic station which supplies the water under pressure for the whole of the machinery comprises two groups of pumps, each driven by a 50 horse-power engine and two accumulators.

Hydraulic and electric travelling cranes

Independently of the grants of the dry dock, gridiron and other works, the Chamber of Commerce have obtained that of the working of a public plant, so as to secure the utmost possible despatch in the loading of vessels or the discharge of the same and the disposal of their cargoes.

Special attention is drawn to the fact that in many instances goods have been unloaded, placed in the

railway trucks and forwarded to their inland destination within a few hours of the vessels' arrival.

Cargoes of coal, iron ore, or similar goods, can easily be unloaded at the rate of 100 tons per hour. Steamers arriving in the morning frequently get off again without extinguishing their main engine fires.

Every facility, is granted particularly to steamers which can load and discharge day and night if required when a special permission is asked beforehand.

The public plant consists of travelling hydraulic and electric cranes and jiggers comprising :

4	hydraulic jiggers of	15 cwt-power
2	» » »	30 » »
17	» cranes »	30 » »
2	» » »	50 » »
2	» » »	5 ton-power
1	» crane »	10 » »
1	» » »	20 » »
1	» » »	30 » »
1	» » »	40 » »
4	electric cranes »	30 cwt-power

The crane of 40 ton-power is provided with necessary implements to enable the landing or shipping of marine boilers, steam or locomotive engines and other heavy machinery or goods of any nature or description, the shipping and unshipping of lower mast or funnels of vessels and even the loading of coals by entire truckloads.

There are, besides, on other parts of the old harbour, two other cranes worked by hand-power.

The first one, 30 cwt-power is established on one of the quays of the Western, tidal basin and the second one, 30 cwt-power, on the East quay of the same basin.

Overhead ‘‘Transporters’’ worked by jiggers, are also used for transshipment of goods from ship to ship or from ship to barge.

In 1905, three and in 1907, four travelling hydraulic cranes, 30 cwt-power, were added to the lifting plant of Carnot dock, which had, on account of the development of traffic often proved inadequate to the requirements of the same. These new cranes are comprised in the table above described.

Moreover, the Chamber of Commerce contemplate the establishment of two floating steam cranes to complete the accommodation of that dock.

Petrole incandescent lamps

1^f 60° per hour for lamps employed for illuminating the cranes or other machinery being utilized.

2^f 40° per hour for lamps employed for other work with a minimum charge of 5 francs per lamp.

Sheds

The Chamber of Commerce have erected on different parts of the New Harbour, as has been aforesaid, spacious closed sheds 130 ft. in width, with over-hanging roofs for the reception, storage and stowage of goods as they are landed or waiting for shipment.

There are actually three sheds for goods (this number will be increased, if needed). Each of these sheds bears the name of one of the three last and late Presidents of the Calais Chamber of Commerce.

The first one, "Paul Devot shed", established on the quay of the Eastern tidal basin, has a length of 525 ft.

The second one, "Crespin shed", erected on the west quay of Carnot dock, has a length of 265 ft. and the third one "Fournier shed", also erected on the west quay of the said dock, has a length of 1050 ft.

Goods of all sorts, those of a dangerous nature excepted can be warehoused therein at very moderate charges.

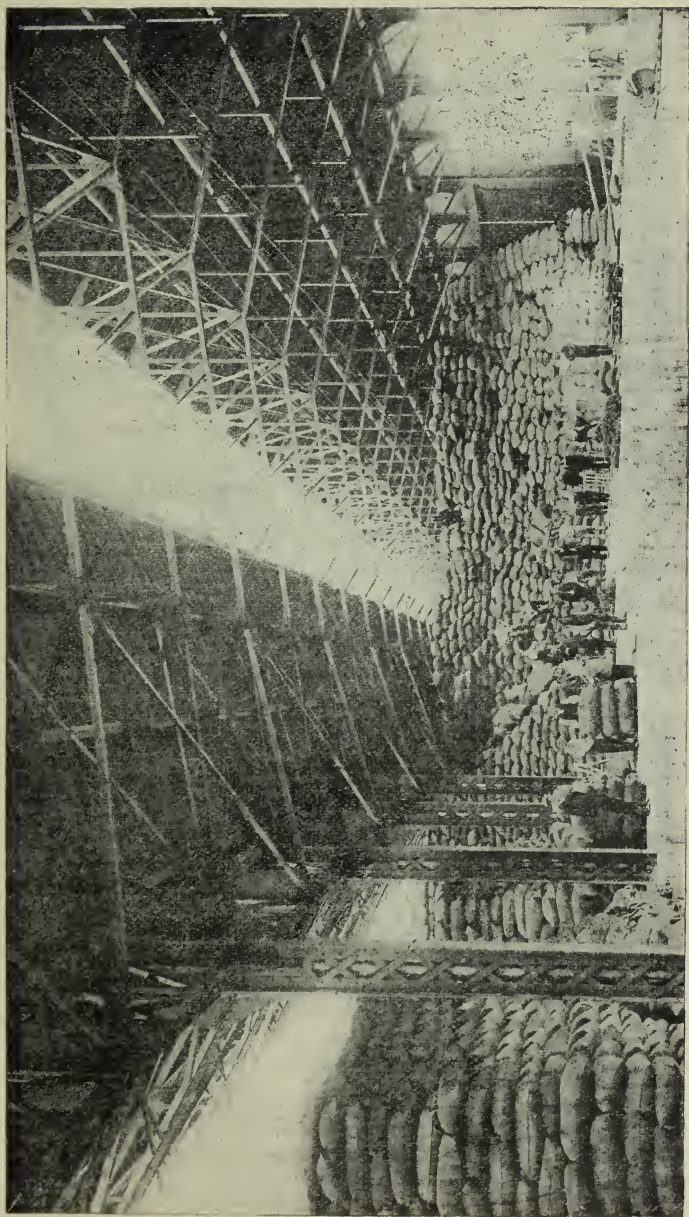
Lines of rails and sidings run parallel to each side of these sheds and give great facilities for loading and unloading waggons of merchandise with great despatch and little expense.

Public Warehouses

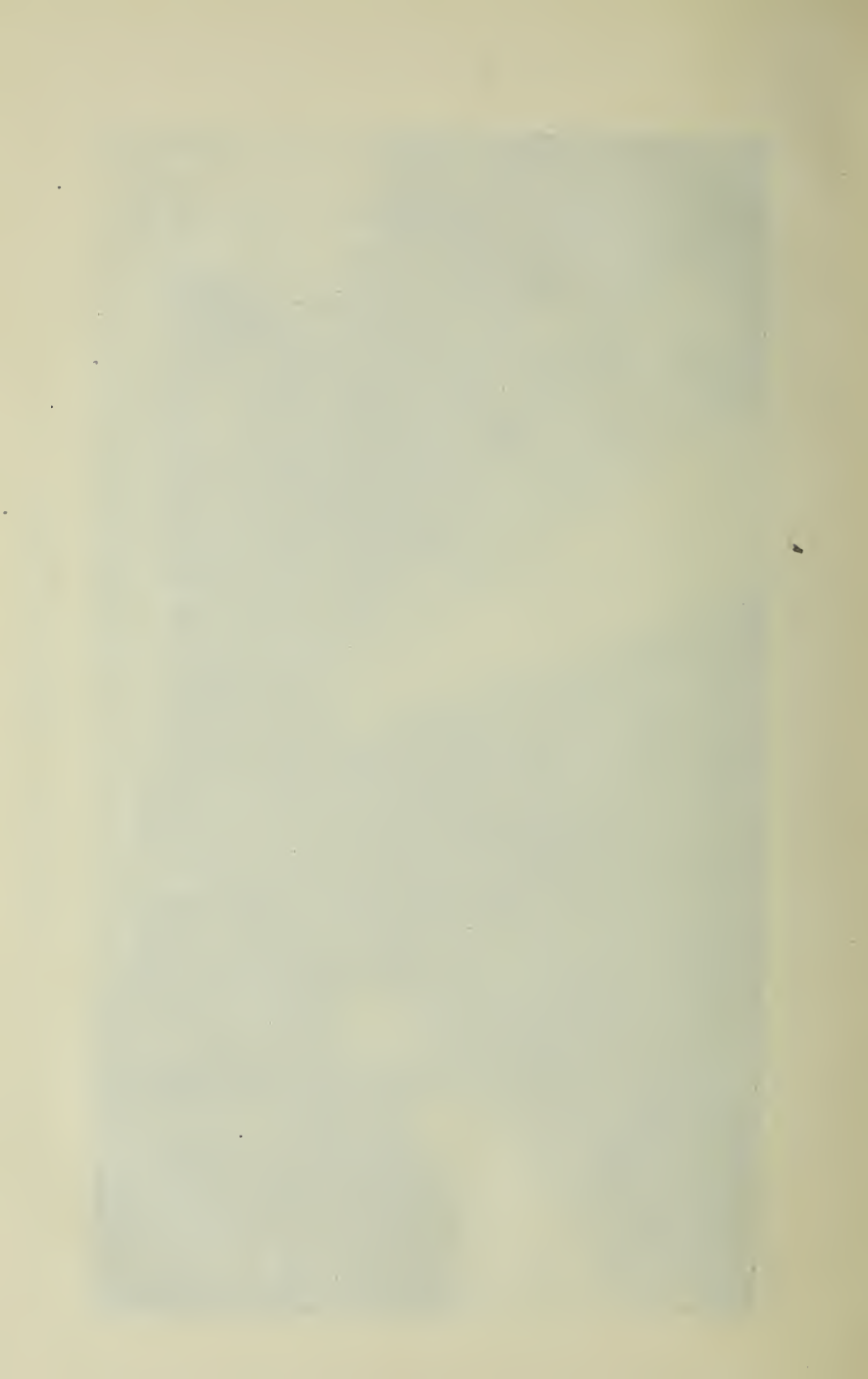
A law has been passed, on the 9th August 1894, authorizing the Calais Chamber of Commerce to transform part of the sheds on the quays into permanent warehouses. This is a substantial advantage to the trading community for although goods have been allowed to remain under these sheds for a limited time without very considerable expense to the importers, the position of parties who took advantage of the privilege was ill-defined, and the matter sometimes led to disputes. The question is now settled, and the Chamber of Commerce are in a position to work this part of their property and plant by the same right as owners of private warehouses.

The Company became "concessionnaire" of the warehouses of the quays and vested with the management of entry and delivery and carting expenses can be saved.

No doubt the Commerce of the district will profit largely by advantages which are offered.



CRESPIN SHED BONDED WAREHOUSE



Bonded Warehouses

There are now at Calais four Bonded Warehouses belonging to the Chamber of Commerce.

The first one, licensed by decree dated as far back as 17th December 1814, is worked by the Customs' Authorities. All goods liable to import duties, manufactures of all sorts, colonial produces, such as: Tea, Coffee, etc., etc., may be deposited therein. **In bond**, awaiting shipment, re-shipment or payment of duties for consumption.

The second one, authorized by prefectoral ordinances dated 22nd January 1886 and 21st December 1894, is worked by the Chamber of Commerce.

This bonded warehouse take in goods of all kinds free of Custom's dues, those of a dangerous nature excepted.

A receipt and a **Warrant** transferable by endorsement, in the form and under the conditions laid down by a law dated 28th May 1858, and a decree of 12th March 1859, are delivered, on demand, to the party having made the deposit of the goods.

By a decree dated 12th July 1887, the Chamber of Commerce have been authorized to open, in this establishment, a room for public sales.

Besides, by a prefectoral ordinance, dated 7th February 1900, the Chamber of Commerce have been licensed to annex to the warehouses an extensive and palisaded ground, near Carnot dock, where can be deposited, in bond or otherwise, goods which by their nature incur no risk of deterioration, such as pig-iron, iron, timber, coals, etc., etc... This ground is connected by rail

with all the harbour works and the Northern railway's branches.

The third bonded warehouse, also worked by the Chamber of Commerce, but under the supervision of the Excise authorities, has recently been opened, it is exclusively devoted to the sugar trade.

This warehouse is also connected by rail with all the harbour works and the Northern railway's branches : Canal boats load and unload alongside.

Since 1893, the traffic of raw native sugar by the port of Calais is growing larger each year.

By reason of the marked development that this traffic is making by way of Calais, the Chamber of Commerce have decided to construct a special warehouse destined for the warehousing of sugar.

This warehouse is established at a short distance from Carnot Dock. It is connected with the embarking quays and with the general track of the port by lines of rails and sidings. It can contain 100.000 sacks.

Fodder Shed

By reason of the important development of the hay, straw and fodder traffic by way of Calais, the Chamber of Commerce have, in 1899, decided to erect a shed especially and entirely devoted to that trade.

That shed, 280 ft. in length and 132 ft. in breadth, is situated on the East quay of Carnot dock ; it is also connected with the general track of the port by lines of rails and siding.

Live Cattle Sheds — Pens

Large and commodious sheds have been erected near one of the landing quays of Carnot dock.

The requirements of the trade in live animals from La Plata, Canada and Russia have been fully met.

The sheds are fitted up with every convenience, fresh water-taps, etc., and facilities exist for dealing with the largest consignments.

Numerous pens for small cattle are adjacent to the sheds.

Lines of rails run along the sheds and pens, so that animals from foreign countries can easily be loaded directly into railway trucks and despatched to any port of France or Belgium.

There are in the town two municipal slaughter-houses.

Test-Office, Condition-House

By Prefectoral ordinance dated 23rd November 1885 and a decree of 17th April 1897, the Chamber of Commerce have been authorized to open a Test-Office or Condition-house, wherein raw and thrown silk, linen yarns, single or twist, cotton threads of all sorts are tested and conditioned.

This establishment is much appreciated by the lace manufacturers of the town.

Weigh-Bridges

The Chamber of Commerce have been authorized to

establish on different parts of the New Harbour four weigh-bridges for the weighing of entire truckloads.

The use of these weigh-bridges saves a great deal of expense, for instance, for coal loads, iron ore, and all goods loaded in bulk.

Locomotive Engine

A locomotive engine owned by the Chamber of Commerce is, on application, employed for the traction of trucks on the railway lines laid down the whole length of the quays.

Electric Lighting

The three sheds and quays on which they are erected are lighted throughout with electric light, in order to allow, in case of need, the working at night of cargoes, shipping and unshipping, etc.

The North quay of the Eastern tidal basin, the bridges and sluices of Carnot Dock, the Pier Station and its annexes, the Dry Dock, are lighted on the same principle.

Ballasting

There are at Calais several free contractors for ballasting. Ballast generally consists of sand brought alongside on shore or lighters; this operation may be dealt with as per agreement.

Spring-Water

Spring-water taps for the supply of vessels exist around the quays of the docks and of the tidal basins.

Ships are supplied by hose at very moderate charges, on application to the Spring-Water Company.

Public Weighers and Measurers

An office of public weighing, measuring and gauging has been instituted at Calais by Prefectoral ordinances dated 20th July 1882 and 12th October 1907.

This establishment belongs to the Municipality and is placed under the Mayor's supervision.

Merchants and interested parties are only compelled to employ this office's sworn agents in case of dispute.

The foreman of these licensed weighers and measurers is bound to sign and deliver, free of charge, a certificate, stating the quantities and marks of the goods weighed, measured or gauged.

Calais Harbour Pilots

The body of the Calais Harbour pilots comprises 12 senior and 3 junior pilots.

The pilots are under the command of the authorities mentioned in a decree dated 12th December 1806.

The Calais pilot-boats have painted in black on a white ground on their bulwarks, the letter P. and the initial letter of the station, viz: P. C. — Pilot, Calais: besides the number assigned to them by the Commissionner of Maritime Inscription.

They have likewise painted black on their main sail an anchor, about 5 f. in height, the letter P., their numerical number and the word "Calais" in full.

Pilots on duty have a silver anchor attached to the button-hole of their waistcoats and besides a license which they are bound to produce on demand.

Most of the pilots go South and West as far as Beachy-Head and North and East as far as the Gallopper-sand and Orfordness. They are liberty to go where they please, and can be sent to meet vessels lying in the Downs or any other place on receipt of captains' telegrams addressed either to the harbour master or to one of the ship-brokers of the port.

At whatever distance the Calais pilots may be met, captains of vessels, bound to Calais, must not refuse their services; distance does not increase the pilot's fee and it can never be higher than if taken 15 kilometres (about 10 miles), off the port (*see pilotage*).

Semaphore or Signal Station

A Semaphore or signal station is established a mile westward of the port.

By using the commercial code of signals, passing vessels, requiring Calais steam-tugs assistance or calling for orders, can communicate with this semaphore, which is connected by the telephone system with the harbour masters's office and by this medium, in case of need, with those of the ship-brokers of the port.

Life-boats

There is a life saving apparatus at Calais and two life-boats; one stationed on the Eastern side and one on the Western side of the harbour.

Steam Fire Engine

To pump the water out of the holds of a ship and to be employed about any services others than those relative to the extension of conflagration, the steam fire engine shall be given on hire at the rate of 25 francs per hour.

The rate comprises the supply of fuel, lubricant matter, and engineers necessary to the working of the engine, but it does not include the cost and charges for carriage, from the depot and back, which shall be borne by the lessee.

The time of hire shall be computed from the moment the engine shall be held at the disposal of the lessee up to the time it shall be returned to the depot.

Any hour begun shall be charged in full.

Half rate in addition shall be charged for the use of the engine on non-working days.

Apparatus for disinfecting and for destroying rats

The Public Plant Office possesses an apparatus for disinfecting and for the destruction of rats and applicable to both ship and cargo. This apparatus being on wheels can also be used for the disinfection of all houses and other places.

Cooking House for the use of the petroleum vessels

A cooking house exists on the North quay at the west dock, for the use of the crew of petroleum vessels.

CALAIS HARBOUR SIGNALS

Day Tide Signals

In 1899, some alterations have been made in the tidal signals shown at various ports and harbours on the coasts of France. The harbour of Calais has adopted those generally in use.

The signals designed to acquaint navigators with the depths and state of tides in Calais Harbour are made, in day time, by means of flags and balls, which are hoisted on an apparatus consisting of a mast and a yarn, established on the round point of the Eastern pier-head. The balls reflect black off the sky.

To indicate the state of the tide, a square white flag with a black cross and a black pennant are used.

The white flag is hoisted as soon as the water, in the channel has risen **above the level of zero of the marine charts.**

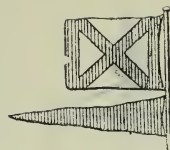
During the flood tide, the pennant remains above the flag; the pennant is placed below the flag during the ebb.

A ball placed at the intersection of the mast and yard means 9 ft. 10 in. above the level of the charts. Each ball hoisted on the flag-staff below the yard indicates 3 ft. 3 in.; when hoisted above it, it means 6 f. 6 in. Hoisted at the end of the yard, a ball expresses 10 in., when from the roads, the navigator sees it on the left side of the mast (Eastward), and 1 ft. 8 in., when he sees it on the right side (Westward).

DAY TIDE SIGNALS

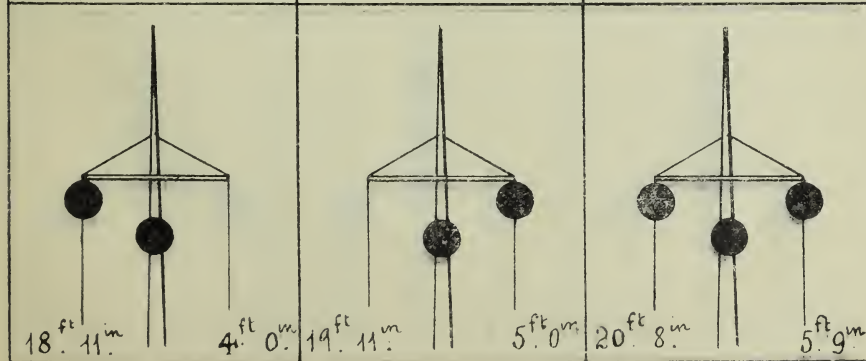
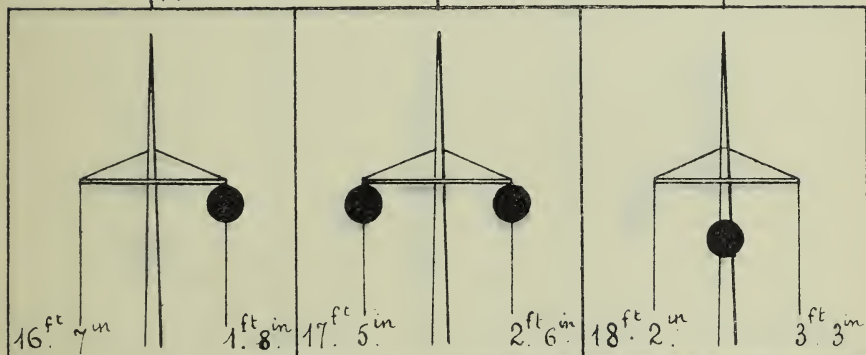
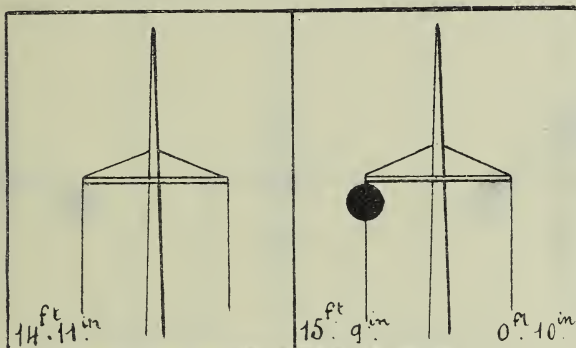


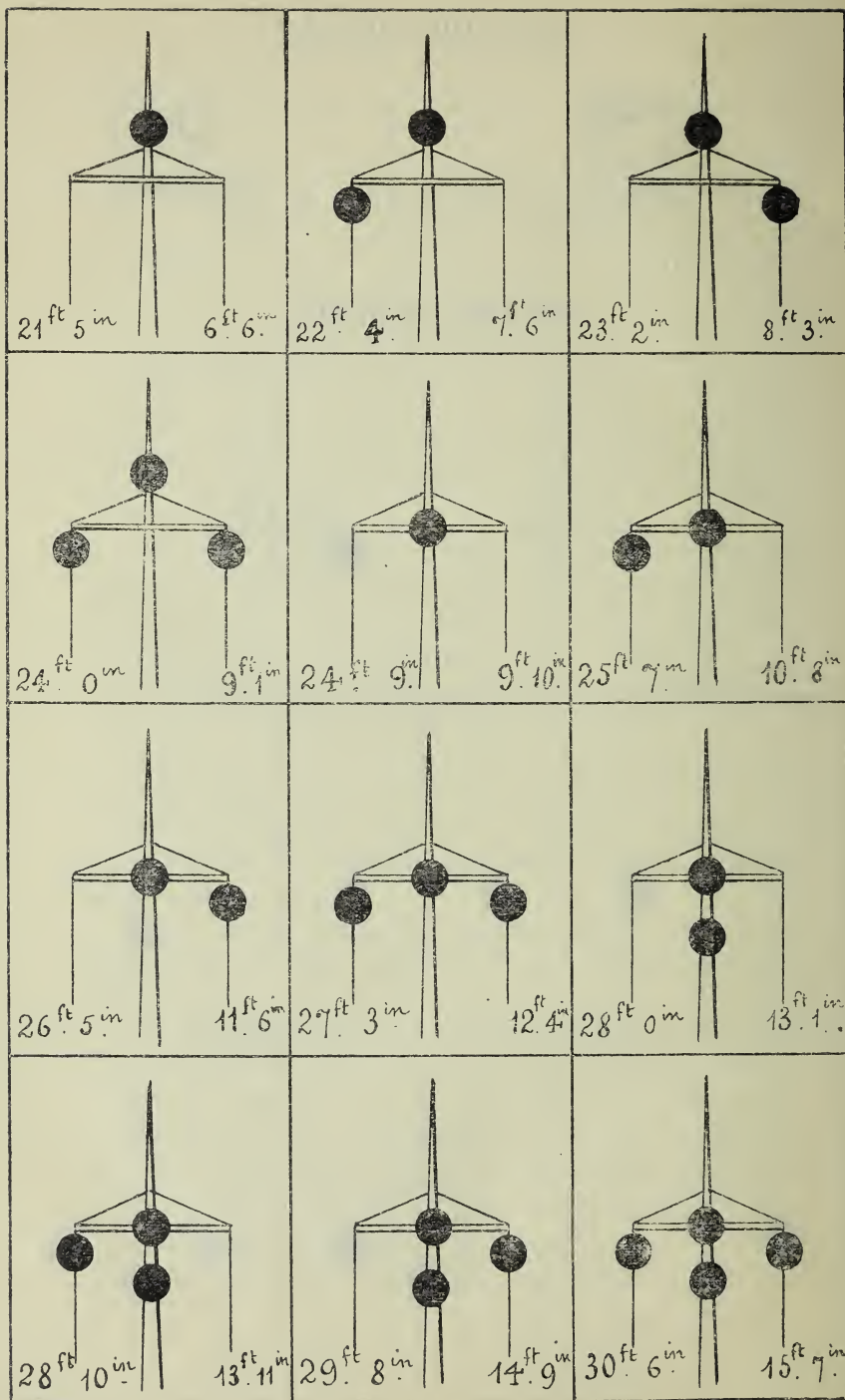
Flood

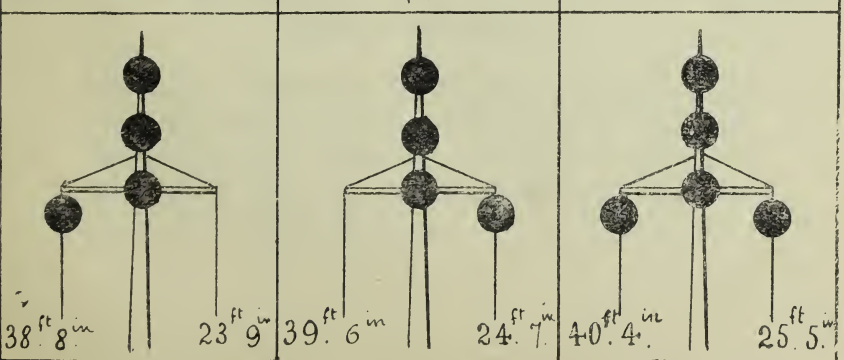
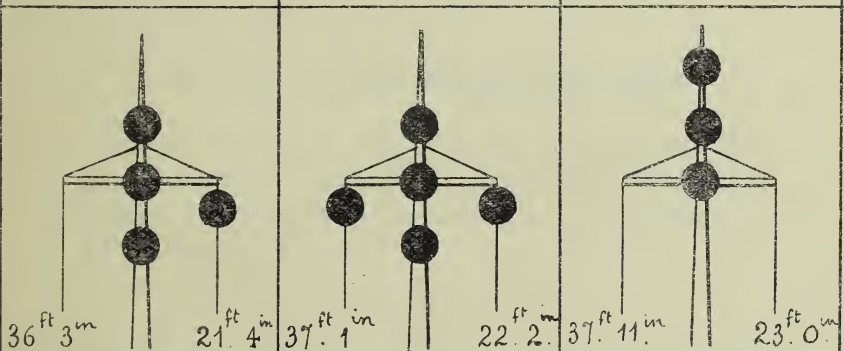
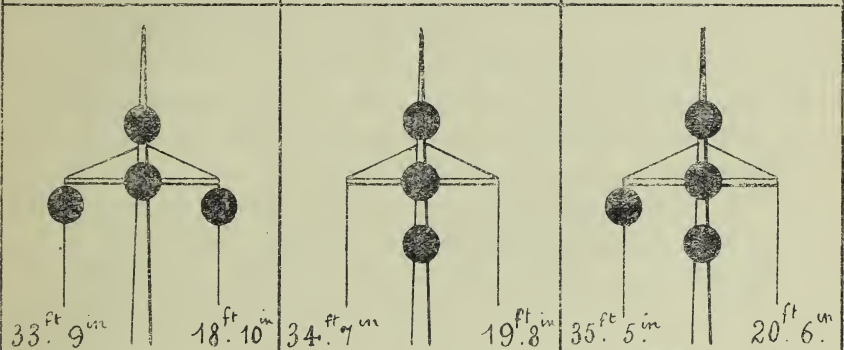
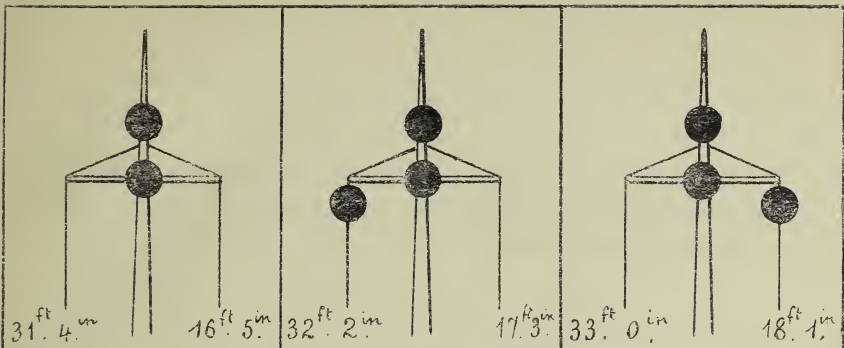


Ebb

DEPTHS OF WATER







To ascertain the depth of water at the entrance to the harbour and in the tidal basin to the Eastward, navigators **must add** to what the pier-head day signals indicate :

14 ft. 11 in. in the first case (entrance)

11 ft. 6 in. in the other case (Western tidal basin)
as explained pages 42, 46 and 84.

In order to avoid to captains the trouble of a calculation and to allow them to know at the first glance the depth of water at the entrance to the port, it has been thought advisable to give on the table annexed the depths above zero and those effective.

It is hardly necessary to explain that the low figures indicate the depths above zero and the high figures those existing at the entrance.

Red flag on the Eastern Pier-head

When unforeseen circumstances render the entrance to the harbour dangerous instead of the day tide signals, a red flag will be hoisted on the mast at the Eastern pier-head.

Night tide Signals

Night tide signals are exhibited from an iron turret, painted white, established likewise on the outer extremity of the new East pier-head and elevated 19 ft. 2 in. above the deck of the pier. Position: 50° 58' 20" N., 1° 50' 30" E.

Night tide signals are made by means of a white light varied by groups of red and green flashes shown every 80 seconds. The flashes of each of those groups are shown at intervals of 5 seconds. Each red flash expresses 3 ft. 3 in. and each green flash 10 inches,

Besides, the white fixed light undergoes a short occultation every 80 seconds during a rising tide and two occultations in close succession during a falling tide. When the white light is varied by coloured flashes the occultations take place about the middle of the intervals separating the groups.

Thus, for instance, when the *white* light is varied by two *red* flashes followed by a *green* one and undergoes one occultation about the middle of its duration, the depth of water indicated as above zero of the marine charts is 7 ft. 6 in. with a flowing tide; this depth is reduced to 5 ft. 9 in., and it is ebbing tide if the apparatus shows a *red* flash followed by *three green* ones with two close occultations about the middle of the duration of the white fixed light.

The night tide signals, show the depth of water **above** zero on the French Marine charts, low water springs British Admiralty charts.

To obtain the depth of water at the entrance to the harbour and in the tidal basin to the Eastward navigators **must add** to what the pier-head night signals indicate :

14 ft. 1 in., in the first case (entrance)

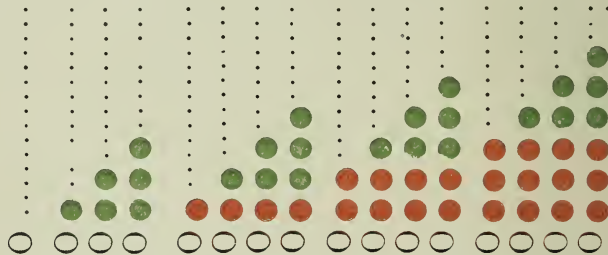
11 ft. 6 in., in the other case (Western tidal basin).

Both depths are given on the table annexed, the low figures indicate the depths above zero and the high figures those existing at the entrance.

Night signals giving the depths of water at the entrance to the port

HEIGHTS

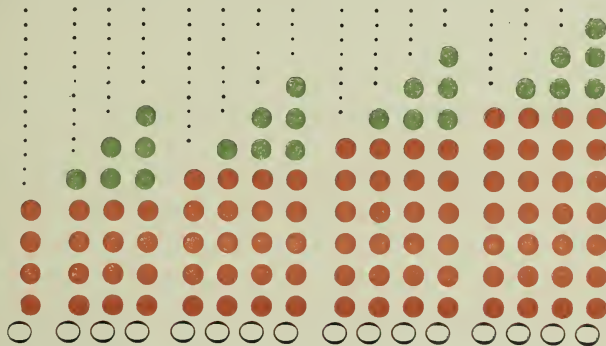
	Above zero		Effective	
	Ft.	in.	Ft.	in.
White light	0	0	14	11
White light varied by 1 green flash.....	0	10	15	9
» » 2 » flashes	1	8	16	7
» » 3 » »	2	6	17	5
White light » 1 red flash.....	3	3	18	2
» » 1 » 1 green flash.	4	0	18	11
» » 1 » 2 » flashes	5	0	19	11
» » 1 » 3 » »	5	9	20	8
White light » 2 red flashes.....	6	6	21	5
» » 2 » 1 green flash.	7	5	22	4
» » 2 » 2 » flashes	8	3	23	2
» » 2 » 3 » »	9	1	24	0
White light » 3 red flashes.....	9	10	24	9
» » 3 » 1 green flash.	10	8	25	7
» » 3 » 2 » flashes	11	6	26	5
» » 3 » 3 » »	12	4	27	3



Night signals giving the depths of water at the entrance to the port

HEIGHTS

		Above zero		Effective	
		Ft.	in.	Ft.	in.
White light varied by 4 red flashes	White light varied by 4 red flashes	13	1	28	0
	» » 4 » » 1 green flash	13	11	28	10
	» » 4 » » 2 » flashes	14	9	29	8
	» » 4 » » 3 » »	15	7	30	6
White light	» » 5 red flashes.....	16	5	31	4
	» » 5 » » 1 green flash..	17	3	32	2
	» » 5 » » 2 » flashes	18	1	33	0
	» » 5 » » 3 » »	18	10	33	9
White light	» » 6 red flashes.....	19	8	34	7
	» » 6 » » 1 green flash..	20	6	35	5
	» » 6 » » 2 » flashes	21	4	36	3
	» » 6 » » 3 » »	22	2	37	1
White light	» » 7 red flashes.....	23	0	37	11
	» » 7 » » 1 green flash..	23	9	38	8
	» » 7 » » 2 » flashes	24	7	39	6
	» » 7 » » 3 » »	25	5	40	4



Red light on the round point of the Eastern Pier-head

When unforeseen circumstances make the entrance to the harbour dangerous, night tide signals will be substituted by a red fixed light enclosed in the lantern of the round point of the Eastern pier-head.

Green Light on the Western Pier-head

The fixed red light on the western Pier-head has, since 1st August 1903, been replaced by a fixed green light elevated 36 feet above high water, exhibited from a white metal lighthouse 27 feet high. This light is kept burning the whole night without regard to time or state of tide.

Fog-Syren

Towards the beginning of 1898, a powerfull fog-syren, worked by a petroleum motor, has been set up in the lighthouse at the end of the Est Pier. Position: $50^{\circ} 58' \frac{1}{4}$ N., $1^{\circ} 50' \frac{1}{2}$ E.

During foggy weather the syren sounds 2 blasts of the same note every minute : — Blast, 3 seconds ; silence, 3 seconds ; — Blast, 3 seconds ; silence, 51 seconds.

Signals relative to the opening of the wet docks

White flag bordered with blue

A white flag bordered with blue, hoisted at the harbourmaster's office, indicates that vessels can enter or leave either of the docks.

The same signal repeated at the dockmaster's office, Quai de Marée, near Bastion n° 1, indicates that vessels can enter or leave the Carnot dock, and if repeated near the gate keepers house, western sluicing basin, indicates that vessels can enter or leave the west dock.

At night, during the time that vessels can enter the Carnot dock, two green lights are shown, one on each side of the lock pit, which is in use, also a green light is shown near the gate keepers house, western sluicing basin, visible to all vessels approaching, from a bearing North of the Quai de Marée, to indicate that vessels can enter or leave the West dock.

Any vessels entering at night are thus warned, as soon as they reach the tidal basin, if they can enter one or the other of the docks. Should the dock gates be closed against a vessel, the captain should, in the absence of orders from the dockmaster, berth at the Quai de Marée or by preference at the South quay of the tidal basin unless his wish is to place his vessel in that part of the tidal basin where she will dry at low water.

Times of the opening of the wet docks Tariff for haulage

*Prefectoral ordinances dated 18 July 1896
25 October 1901 and 22 November 1909*

No vessel shall be allowed to enter or leave the lock pits but at the time and in the order fixed either by the harbour officer and master specially appointed to that service.

No vessel is allowed to stop in the passage of the lock pits, she must go through with the utmost possible celerity, making use of all the means prescribed by the harbour officers.

Captains of steam-ships will make use or not of their engines to enter the lock pits or the docks, in accordance with the orders of the harbour officer or master on duty.

During day tides, that is to say when it will be high water, according to the tide annual between 6 A. M. and 8 P. M., the locks will be regularly open to shipping 2 ½ hours before high water and shut 2 hours after slack water of high tide from 5 A. M., at the earliest, to 9 P. M., at the latest.

During night tides, that is to say when it will be high water, according to the tide annual, between 8 P. M. and 6 A. M., the locks will be regularly open 1 ½ hour before high water and shut 1 hour after slack water of high tide.

However the manœuvres can be made one hour

earlier or later according to circumstances of which the harbour officers alone are to decide.

All operations made before 5 A. M. and after 9 P. M. will be considered as night service whatever may be the time of high water.

In pursuance of a prefectoral ordinance dated the 18th July 1896, in order to afford, at all times, to captains the means of executing with rapidity and security all orders given by the harbour officers and to these the means of having their orders attended to, in case these should not be complied with a special body of dock attendants has been instituted at Calais ; these men are appointed by the Prefect, on the recommendation of the Engineers of the harbour and placed under the command of the harbour officers and masters and under the supervision of the Engineers.

In default of agreement between the dock attendants and captains, the fee of this body of men, instituted in pursuance of the preceding clause, and of the auxiliaries of the body, shall be rated as follows, and shall be paid to the attendant-master :

1° — 0 fr. 03 c. per ton, on the registered tonnage, for any vessel passing through the lock pits, at a day tide either for entrance or leaving. Minimum charge 1 fr. 50.

2° — 0 fr. 06 c. per ton, on the registered tonnage, for any vessel passing through the lock pits, at a night tide either for entrance or leaving. Minimum charge 3 francs.

3° — 0 fr. 50 c. for any lighter, canal boat or flat craft and 0 fr. 25 c. for any raft which shall go through the lock pit of communication with the maritime

basins and of the canal dock in either way, at day or night time.

The dues rated as per foregoing clauses shall be paid as aforesaid, to the attendant-master who is required to deliver to the party having made the application a receipt for the amount paid.

As to passages subject to a previous demand, the dues shall be paid as soon as such application be granted.

Sums paid for passage, specially applied for, by vessels not having been ready at the appointed time shall not be refunded.

The dock attendants give their assistance free, under the following conditions ;

To all small boats and to such boats as do not carry a mast of which the tonnage is less than 15 tons ;

To all vessels passing through the lock pits to complete in the West dock their operations of loading or unloading commenced in the Carnot dock, or vice versa when such vessels have already paid a first fee to the dock attendants, but the exemption is only on the first displacement of the vessel should she be moved more than once.

Signals relative to dredging work

Red flag

When the presence of the dredgers in the channel necessitates all navigation being stopped in this part of the harbour, a red flag is hoisted at the harbourmaster's office, also at the flag-staff of the Western pier,

near the light keeper's house and at the signal flag-staff at the extremity of the East-Pier. The dredger has its ropes made fast on the jetties and a line is stretched across the channel opposite the harbour master's office.

At night, the signal substituted is a red light placed at the harbour master's office and the fixed red tide light of the Eastern pier, under which another red light is placed.

Moreover by day and night, the dredgers show the signal prescribed by clause 4th of the general regulations annexed to décret of the 21st February 1897, for vessels unmanageable.

The signals forbid the movement to any vessel under penalty of proceedings being taken against offenders.

When, during day time, it is possible, in spite of the presence of dredgers in the channel or inner harbour to give liberty to pass to steamers running a regular service and to sailing-ships or to steamers under 50 tons of gauge, the flag is hoisted at the aforesaid places but it is hoisted half-mast only. The dredgers show then a green pennant with a green flag above it, and, at the same time, two black balls or marks according to the general regulations.

In this case, captains or mates of the aforesaid vessels which alone are allowed to avail themselves of this exception, navigate at their own risks, that is to say, they are responsible for any damage or injury they may cause, either to their own vessels, or to the dredgers and in general to any harbour work, whatever may be the circumstances in which this damage or injury may occur.

Nó corresponding signal is made at night.

Suspension of all movements in order to facilitate the entrance of a ship

Red flag bordered with green

The suspension of all movements to facilitate the entrance of a vessel is signalled during day time by a red flag with green border hoisted at the dockmaster's office, Quai de Marée, near Bastion n° 1.

This signal is replaced at night-time by a red light over a green light, shown from the Southern post on the Quai de Marée.

Suspension of all movements in order to facilitate a ship to leave

Green flag bordered with red

The suspension of all movements to facilitate the departure of a vessel is signalled during the day time at the dockmaster's office, Quai de Marée, near Bastion n° 1, by a green burgee.

This signal is replaced at night-time by two green lights, one above the other, shown from the southern post on the Quai de Marée.

The above mentioned signals will be shown throughout the time, that circumstances make it necessary.

Captains, masters or mates are to comply with notices given by the signals, without prejudice of proceedings to be taken, if such are to be so taken against pilots in case of infringement. The presence of

these signals is always to be considered as equivalent to a special and individual order given by the harbour master for the execution of the necessary manœuvres in accordance with the prescriptions of the present ordinance.

It is forbidden to vessels or fishing boats to beat about in the inner channel or tidal harbour. However this manœuvre can be allowed, in particular circumstances, by a special authorization granted by the harbour officer on duty.

Flood Sluices Signal

Blue flag

Whenever the flood sluices are to work, notice is given thereof, during the preceding high tide, by a blue flag hoisted at the sluice gates.

Captains must then take the necessary precautions in order to protect their vessels against any damage this sluicing may cause them.

Signals for Sailing direction

When it happens that the sea is too heavy at the entrance to allow pilots to get out to vessels nearing the port to enter, (tide signals being up, showing that the entrance is practicable), signals are made in day time, at the Eastern pier-head, by means of a mast with a moveable yard on which a disc is hoisted, so that vessels may take the fairway of the channel.

If they are in the right direction, the disc is kept vertical ; if otherwise, the yard with the disc is inclined in the direction they ought to steer.

Pilot Vessel Signals

The following signals are established for the pilot vessels.

During the day. — A pilot vessel, at sea, flies at masthead her national flag and besides a white flag bordered with blue ; this last flag is dipped several times until answered by the ship in sight.

At night. — Pilot vessels show a *white* light several times at intervals of *fifteen seconds* during *one minute* ; this signal is to be repeated every quarter of an hour.

Signals for Pilots

During the day. — A ship requiring the pilot's assistance, should hoist a white flag bordered with blue, on her national flag, at the foremast head.

At night. — A ship requiring a pilot should shown a *white* light above the bulwarks and screen it several times at intervals of *fifteen seconds* during *one minute* : this signal should be accompanied, if necessary, by blue lights burnt at intervals of at least *fifteen minutes*.

Shipbrokerage

According to decree of the 9th June 1892, Shipbrokerage charges at Calais are the same as those at Dunkirk, Boulogne, Havre, etc.

Dues, Tariffs, and Regulations Rules and Customs, General information

Notice

The opening of the New Harbour has necessitated, as may easily be imagined, the revisal of the general regulations, rules and customs of the port and of tariffs relative to its works.

The Dues, Regulations and Tariffs actually in force are alone given herein.

Quay dues in France and Algeria

In pursuance of a law promulgated by the *Journal Officiel* of the 28th December 1897, quay dues in French and Algerian ports have, from that date, been modified.

The following is the complete text of the new law.

Art. 1. Vessels of any nationality, laden wholly or partly, arriving from a foreign country or a French colony other than Algeria, will pay quay dues in the ports of France and Algeria according to the following scale.

One franc per ton of the net tonnage if the total number of metric tons of 1.000 kilogrammes of mer-

chandise landed or shipped exceeds one-half the net tonnage of the ship.

Fifty centimes per ton if the merchandise landed or shipped is less than one-half and more than one-fourth of the total net tonnage.

Twenty-five centimes per ton if the quantity is less than one-fourth and more than one-tenth of the net tonnage.

Ten centimes per ton if the quantity is one-tenth of the net tonnage or less.

The quay dues are reduced one-half for vessels landing merchandise when the vessels have arrived from a port within the limits of international coasting trade as defined by the law of January 30th 1893 (ports of Europe and the Mediterranean), and also for vessels loading merchandise for a port situated within the same limits.

Vessels performing in the same port operations of discharging and loading will be charged separately for each operation according to the above tariff.

Art. 2. In case of successive calls in different ports, the quay dues will be levied in each port in accordance with the rules laid down in Art. 1, but in no case can the total dues on the voyage exceed 1 f. per ton on the net tonnage. The rate is reduced to 50 centimes per ton for vessels in the case provided for by paragraph 6 of Art. 1.

Art. 3. In calculating the tonnage of the operations, each passenger embarked or landed shall be considered as the equivalent of a ton of merchandise; also each head of large cattle, horse or mule. Each head of small animals shall be counted as a quarter of a ton. Passengers' luggage and the small provisions they may

have with them for the voyage shall not be included in the quantity of merchandise landed or taken on board.

Art. 4. The quay dues in the preceding articles shall only be levied in Algeria on the merchandise, passengers, animals and vehicles landed.

Art. 5. Victualling and coaling shall not be considered as commercial operations.

Art. 6. Are abrogated : — Art. 6 of the law of the 30th January 1872 ; art. 7 of the financial law of the 29th July 1881 ; paragraph 1 of Art. 14 of the financial law of the 28th December 1895.

Tonnage Dues payable at Calais

Besides the various dues imposed by the State at **all French ports**, some ports have been authorized by decrees to raise additional taxes to be devoted to works of improvement.

Large sums of money, 45.000.000 fr., (£ 1.800.000 sterling) in round figures, have been spent by the Calais Authorities for works of extension and improvement of the harbour ; the money being obtained partly from the State and partly from the proceeds of the special poll-tax and tonnage dues levied on passengers arriving or leaving and ships entering Calais respectively.

These dues are collected by the Customs' Authorities, while the State contributes 806.339^f 94^c per annum, towards a sinking fund for the re-payment of the loans contracted by the Chamber of Commerce, which are re-payable in 21 annuities (1892-1912).

In pursuance of a decree of the 3rd October 1883, a law of the 4th December 1888, and a law of 22th December 1903, the following taxes are imposed on vessels entering or using the Calais Harbour :

A due of 0 f. 60 cent. per ton, registered tonnage, on any vessel French or Foreign, coming in laden or to be loaded.

French ships used for coasting fishery; coasting trade inner navigation and towing, pilot boats and ships of all sorts belonging to the State or at the State's service are free thereof.

A due of 0 f. 14 cent. per ton, on ships specially employed for the conveyance of passengers. even when they have goods on board, provided the measured tonnage of goods does not exceed the tenth part of their registered tonnage.

Steamers running a postal service subsidized and obligatory shall pay the following taxes :

0 f. 375 m/m per ton, registered tonnage, payable by vessels which being employed for the conveyance of passengers shall have, on a voyage, shipped or landed goods, when the whole quantity of such goods computed according to freight tonnage shall be above the tenth part of the registered tonnage of such vessels.

0 f. 08 centimes per ton, registered tonnage, when the quantity of goods shipped or landed shall be below the tenth part of the registered tonnage of such vessels.

The raising of these taxes is granted to the Chamber of Commerce, who devote the sums raised to works of improvement to the harbour.

The collection thereof is made by the Customs' Authorities.

Vessels calling at Calais, from whatever port or

place they may arrive and whatever may be their port or place of destination, shall have the following benefit of reduction.

1° On the tonnage dues actually levied at Calais, in pursuance of the law of the 4th December 1888.

2° On the dues levied at Calais, in pursuance of decree dated 3rd October 1883.

Such reduction shall be scaled as follows :

60 % when the quantity of goods, shipped or landed computed according to freight tonnage, shall not be above the fourth part of the net register tonnage.

40 % when such quantity shall be above the fourth part of the register tonnage, but shall not exceed one half.

20 % when such quantity shall be above one-half of the register tonnage, but shall not exceed three fourth thereof.

Vessels coming either from foreign countries and colonies or from a French port on the Mediterranean sea, entering the port of Calais, after having called at any other French port on the Atlantic Ocean or English channel, where a local tax shall have previously been paid, shall continue to enjoy the benefit of the reduction authorized by the law dated 4th December 1888, whenever the application of the foregoing clause shall not afford them a more favourable treatment all the provisions of the said law shall remain in force.

According to the terms of a Ministerial decision elicited by the Calais Chamber of Commerce, when a ship has not sufficient coal to pursue her course, the action on her part of touching at the port of Calais, with the sole object of supplying her bunkers constitutes neither a voluntary stoppage nor a commercial opera-

tion. It is, therefore, considered as a compulsory entry into harbour, and, in consequence, the ship is exempted from port dues, as well as quay dues and health dues.

Such dues are, however, payable if the ship takes on board a greater quantity of coal than that necessary to replenish her bunkers.

The attention of shipowners is being drawn to Calais as a port of call for steamers requiring bunkers. Oversea trading vessels of all nations, coming from or going to Northern countries, call very frequently at Calais to bunker. Masters who have coaled at Calais have expressed their great satisfaction at the quickness and ease with which their vessels have been coaled.

Towage (¹)

Charges for the use of Steam-tugs

The minima charges to be collected since the starting of the service of the Steam-tugs belonging to the Chamber of Commerce, apart from tonnage dues regulated by decree dated 3rd October 1883, are the following.

Dues for the use of Steam-tugs to be paid inwards and outwards

1st zone. — From any part whatsoever of the tidal

(1) By using the Commercial code of signals, as has been aforesaid vessels passing Cape Gris-nez and requiring Calais steam-tugs' assistance can communicate with the Semaphore and by this means a telegraphic message may be sent free of charges, to the Calais Steam-tug Department.

These boats have yellow funnels with black tops.

Lloyd's signal letters

Calaisien : H. P. B. J.

Champion : H. K. L. S.

basin, the tidal harbour or the channel to the distance of a mile beyond the pier-head and vice-versa :

1° Inwards : 0^f 40° per ton register

2° Outwards : 0^f 20° » »

2nd zone. — From any part whatsoever of the tidal basin, the tidal harbour or the channel to 4 miles or thereabouts off the pier-head and vice-versa :

1° Inwards : 0^f 60° per ton register

2° Outwards : 0^f 40° » »

3rd zone. — From any part whatsoever of the tidal basin, the tidal harbour or the channel to 7 miles or thereabouts off the pier-head or vice-versa :

Inwards and outwards, per ton register : 0 fr. 90 c.

Minima charges

1° Inwards

One ship	30 fr.
Two ships at the same time	40 »
More than two ships at the same time.....	50 »

2° Outwards

One ship.....	20 fr.
Two ships at the same time	30 »
More than two ships at the same time	40 »

When several ships are taken in tow at the same time, each of these will have to pay a minimum share, proportionate to her gauge

Movements within the harbour

The dues relative to movements within the harbour are as follows :

	F.	C.
1° For ships shifting from any part whatsoever of the tidal harbour, the tidal basin to one of the floating docks, or vice versa, per ton register	0	10
2° For ships shifting withing the floating docks, per ton register	0	05
3° For towing a lighter or canal boat, whatever its tonnage may be, from any part whatsoever of Carnot dock to the Canal dock's sluices	5	—
4° For steamers not being taken in tow, but assisted in their shifting by a steam tug, per ton register	0	10

Fishing Boats. — Pilot Boats

Boats light, inwards or outwards.

	RATE PER BOAT		
	1 boat	2 boats together	More than 2 boats together
1 st zone	8 f. 00	7 f. 00	6 f. 00
2 nd zone	10 70	9 30	8 00
3 rd zone	13 30	11 60	10 00

The same tariff is applicable to pilot boats.

Ships are to find their own tow-ropes, in case the steam-tug's ropes be used, an additional charge of 0 fr. 05, per ton register, shall be paid, but in case of the breaking of the said tow-rope, the Chamber of Commerce would, from the fact, incur no responsibility whatsoever.

Vessels of the State Navy shall pay the same dues as merchantmen.

Any captain of a ship who, having been entered to take his turn of towing, refuses from any cause whatever to avail himself of it, shall pay the Chamber of Commerce, as an indemnity, a sum equal to the fourth of the due for minimum distance, the due being scaled according to the tonnage of his ship.

Other services than those of towing and not comprised in this tariff, performed at sea, in the channel or the docks shall be matter for a special remuneration which shall be rated according to clause 47 of the general statute.

For the application of towage rates, the number of tons of gauge to be rated is scaled according to the French Custom's official measurement; steam-ships are to pay according to the net tonnage, that is to say, the space occupied by the engines, boilers and coal bunkers being deducted.

Captains of ships having been taken in tow have the right to send back home free of charge, their pilots on board the steam-tugs.

Any captain using a Calais steam-tug is, with regard to the setting of the tow-rope and management of his ship to comply with the orders the captain of such tug is entitled to give him.

In case these orders should not be complied with, the captain of the tug shall have a right to let go immediately the tow-rope.

Any captain of a ship towed or assisted by one of the tugs belonging to the Chamber of Commerce is to manœuvre and take himself the necessary precautions in order to avoid any accident, collision or mishap, and consequently the Chamber of Commerce, shall not be held responsible for any damage of whatsoever nature

or kind sustained or done by the vessel in tow. (Prefectoral orders dated 8th June 1892 and 15th January 1904 ⁽¹⁾).

Pilotage

Regulation and Tariff

Extract from decree dated 31 st January 1895

Clause 78. — The Calais Harbour pilots number twelve senior and three junior pilots.

Clause 82. — Pilotage is due only if pilots have boarded ships outside the jetties, otherwise their service is considered only as assistance and they have only right to claim fee of attendance as within the harbour.

Clause 83. — When a pilot fails to take a ship to the quay berth appointed by the harbour officers, his fee is paid only if the officers themselves acknowledge that he could not execute the order given.

Clause 84.—When there is an absolute impossibility of getting out of harbour, pilots are employed, under the harbour master's command at the working of the signal-staff placed on the Eastern-pier, with the transmission of signals to vessels nearing the port to enter, so that the vessels may take the fair-way of the channel; in this case, one-half the fees due per each vessel is allowed to pilots, according to tariff and without any over-charge for foreign vessels.

(1) No stranger, not having a local pilot on board is allowed to take in tow vessels entering or leaving the harbour. (Prefectoral order dated 17th December 1891).

Clause 86.— French or English steamers exclusively employed for the conveyance of mails are assimilated, for pilotage dues, to men of war: when they have on board gold or silver, specie, bullion, etc., they are treated as merchant vessels under the most favoured conditions.

Captains of French or Foreign ships having neither broker nor consignee are bound to pay, within 48 hours from ship's arrival, sums due for entry and to pay the outwards pilotage before leaving.

All other indemnities are payable in ready cash.

Pilotage rates inwards and outwards

Clause 87. — Any sailing vessel, French or assimilated thereto ⁽¹⁾, liable to pilotage, shall pay for pilotage dues, if laden, 0 f. 25 centimes per ton, registered tonnage.

Vessels are considered as laden as follows :

1° Those having on board one or more passengers, gold or silver, specie, etc.

2° Those carrying a cargo of above one third of their registered tonnage of a cargo filling up the hold.

Vessels in ballast pay one-half the dues shown above.

Yachts and pleasure boats are always considered as in ballast.

Steamers other than those enumerated hereafter are always considered as laden and pay one-half the dues

(1) Vessels assimilated to French, as to pilotage, are those sailing under the flag of the following countries: Argentine Republic, Austria-Hungary, Belgium, Brasil, Chile, Colombia, Denmark, Dominican Republic, Germany, Great Britain, Greece, Holland, Honduras, Mexico, Monaco, Montenegro, Paraguay, Roumania, Russia, Servia, South African Republic, Spain, Sweden, Norway, United States of America, Uruguay.

for laden sailing vessels according to ordinance dated 10th August 1841.

Foreign vessels not assimilated to French pay one-half over and above the rates due by French vessels.

French or foreign vessels putting into the harbour for shelter, or for any cause whatsoever, pay, in and out, but two thirds or fixed dues for vessels bound to the port.

Ships having left the port and putting in again within 48 hours, without having put into any other port, pay but one-half of the tariff inwards and outwards.

Steamers used for the conveyance of mails or passengers between Calais and Dover pay, inwards and outwards, a fixed due of 7 francs.

When a ship comes in and goes out during the same tide or during an interval not exceeding four hours, the fee shall be 12 francs for both operations connected.

The same tariff shall be applicable to steamers employed for the conveyance of goods or passengers from Dover, Folkestone and Ramsgate, and running regularly, as well as those exclusively employed for the conveyance of excursionists, whatever port they come from, if such steamers do not measure more than 200 tons, registered tonnage; if over 200 tons, such steamers shall pay 20 francs inwards and 20 francs outwards.

If a vessel exempt from pilotage, in pursuance of clause 8th of the law dated 30th January 1893, requires the pilot's assistance, such vessel shall pay pilotage at the rate of 150 tons, if a steamer.

Any steam-tug not belonging to the port of Calais and any merchantman taking in tow vessels entering or leaving the port are bound to take a pilot on board. In such case, the rate to be paid to the tug's pilot shall be equal to the third of pilotage dues payable by the ship in tow

Indemnities to pilots

Clause 88. — Whenever a pilot, having been requisitioned, goes out to the roads to bring a vessel in and this vessel cannot be brought into port, either on account of want of water, or captain's will, or any other motive, the pilot is paid as follows :

Per each night spent on boards, besides his food.....	6 f.
---	------

Per every tide in the roads, in the absence of the captain, on board a vessel that is not entering the harbour.....	6 f.
---	------

However short may be the service of a pilot employed in the roads, on board ship. the pilots is entitled to a fee of.....	6 f.
---	------

When a pilot is detained on board a vessel under quarantine he is paid per 24 hours besides his food, which he has right to.....	5 f.
--	------

When a pilot is requisitioned to take a vessel to sea, if the vessel does not go out, he is allowed a fee of.....	3 f.
---	------

Pilots employed on board vessels within the harbour are allowed per day or night tide.....	6 f.
--	------

When a pilot boards a vessel, standing on her course to Calais 15 kilometres (about 3 marine leagues) off the port, he has a right to

a fee amounting to the fifth over the rate fixed by tariff for pilotage of a boarded ship.

When a captain, in the roads, has asked for a pilot, he is bound to employ him or else to pay him 12 f.

The indemnities specified in the present schedule are directly collected by the pilots themselves.

Taking vessels to another port

Clause 89. — Fees to pilots taking vessels laden or in ballast to the ports hereinafter named, on their complying with prescriptions of clause 18 of decree dated 12th December 1806, are fixed as follows :

French vessels and foreign assimilated.

	of 100 tons and under, per vessel	above 100 tons per ton
From Calais to Gravelines...	28 f.	0.28 c.
» » to Boulogne ...	40 »	0.40 »
» » to Dunkirk. ...	40 »	0.40 »

The pilot has a right besides to the expenses of his return journey at the rate of 2 francs per myriametre (about 6 ¹/₃ English miles).

Foreign vessels not assimilated to French pay one half over the rates fixed above.

Assisting Boats

Regulation and Tariff

By decree dated 5th March 1896, the management of the assisting boat service has been conceded to the Chamber of Commerce.

Assisting boats ordered either for services within Calais Harbour, or the entry or departure of vessels. shall be paid as follows :

Vessel of a tonnage not exceeding 120 tons shall pay per boat employed 9 f.

From 150 tons, registered tonnage, an over-charge of one franc, per indivisible fraction of 100 tons, shall be paid, without however the amount of fee exceeding 15 francs per assisting boat employed..... 15 f.

Mail-packets and passenger steamers plying regularly, whatever their tonnage may be, shall pay per boat employed 7 f.

Tariff applicable to teamers (cargo-boats) running a regular service, according to a ministerial decision dated 17th December 1896.

1° Steamers running a daily service :

Vessel of a net tonnage not exceeding 150 tons shall pay per boat employed..... 7 f.

Above 150 tons. an over-charge of 0^f 50 per indivisible fraction of 100 tons shall be paid without however the amount of fee exceeding 10 f. per boat employed..... 10 f.

2° Steamers running a bi-weekly service :

Vessel of a net tonnage not exceeding 150 tons shall pay, per boat employed..... 8 f.

Above 150 tons an over-charge of 0^f 50 per indivisible fraction of 100 tons shall be paid, without however the amount of the exceeding 11 f. per boat employed..... 11 f.

3° Steamers running a weekly service :

Vessels of a net tonnage not exceeding 150 tons shall pay per boat employed..... 8 f. 50

Above 150 tons, an over-charge, of 0^f 50 per indivisible fraction of 100 tons shall be paid, without however the amount of fee exceeding 11 f. 50..... 11 f. 50

Any assisting boat ordered by a captain to execute an order can claim payment of such dues although the said captain has not made use of her.

If however the delay be caused by a change of wind or any other cause independent of the captain's will, the boat shall receive but one-half this allowance.

To make good their claim to charges as stipulated by the foregoing tariff, assisting boats, employed at the entry or departure of a vessel, are bound not to leave the ship they assist unless, in the first place, she is well moored, fitted with chains with chafing gear and fenders placed to quay, and, in the second place, only after having accompanied the vessel to the extremity of the pier, unless they have been previously dismissed by the captain.

Assistance shall be given to vessels having made an application to that effect according to their proper turn of manœuvring. Consequently the order of priority shall be exclusively ruled by the Harbour officers appointed to command the manœuvre of such vessels.

Assisting boats intended to assist vessels, on the captain's request, during their entrance to Calais Harbour, are to go to the extremity of the pier or, in case of heavy weather, to keep as close as possible to the entrance of the port.

Any assisting boat ordered to assist a vessel out is to be at the captain's disposal one hour before departure.

The Chamber of Commerce shall be bound to have on shore one man, at least, per boat employed, to receive the hawsers and make the same fast to the mooring posts designated by the harbour officers.

Sheds

Tariff

WAREHOUSE RENT, PER 1000 KIL. (GROSS WEIGHT)

Per period non-divisible of 5 days.....	0.05
Per day during the 5 following days.....	0.01
» 10 ».....	0.02
» 10 ».....	0.03
» after the 30 th day.....	0.0233

Public and Bonded Warehouses

Tariff

Schedule of rules and regulations

A. — *Warehousing rent per 1.000 kilogs (gross weight).*

1° Per period, non-divisible, of 10 days to the third period included.....	0 ^f 20 ^c
2° Per non-divisible, period of 15 days to the sixth period included.....	0 ^f 35 ^c
3° Per non-divisible period of 15 days beyond the sixth period.....	0 ^f 50 ^c

Warehousing rent is due for the whole consignment from the day of entering of the first package into the warehouse.

Any consignment under 1.000 kilogs in weight shall be chargeable as if it were of 1.000 kilogs,

The rent for every period begun shall be collected in full.

Reduced tariff applicable to the warehousing of merchandise which, for want of room could not be placed in the warehouses facing the quays but are deposited in that part of the shed constructed of reinforced concrete not set apart as a general warehouse and for bonded stores.

For each period of 10 days or less..... 0,10°
Warehousing charges are due on the entire lot from the date of entry of the first package.

All lots which do not reach the weight of 1.000 kilogs are charged warehousing as on 1.000 kilogs.

The charge is levied on each period commenced.

Wood goods will only benefit by the reduced tariff on condition that at least 1.000 kilogs are stacked in a square metres.

B. — *Handling of goods at entry and on leaving.*

1° For every consignment not exceeding
10.000 kilogs in weight, per 1.000 kilogs..... 0^f 15°

Every fraction of 100 kilogs shall be charged
for as 100 kilogs..... 0^f 30°

Every fraction of 1.000 kilogs shall be charged for as 1.000 kilogs.

Charges for handling as shown in the above tariff comprise :

On entry : the receipt of goods from the hands of depositors at the warehouse doors, placing and stowing of same.

On leaving : the handling and portorage to the doors where depositors are to take them.

The minimum charge for every entry and removal shall be one franc.

The present tariff drawn up as regard goods deposited in the Public warehouses shall be applicable to those deposited under the rules and regulations of Bonded warehouses.

Additional taxes

In pursuance of a ministerial decision dated 5th March 1897, the following additional taxes shall be applicable to goods deposited, under warrant, in the Public warehouses, under the rules and regulations of the Bonded warehouses.

1° For delivery warrants and receipts for every number of entry (stamp in addition)..... 1^f 00

For every 1.000 kilogs or fraction of 1.000 kilogs, per non-divisible period of 30 days, during the validity of warrants..... 0 05

2° For transfers :

For every 1.000 kilogs or fraction of 1.000 kilogs, handling, if necessary in addition..... 0 50

3° For administration expenses :

For booking at entry fixed due per number.. 0 60

For booking or leaving per bulletin delivered per every delivery partial or total..... 0 10

Sugar Bonded Warehouse

By a decree of the President of the Republic, dated October 14th 1890, a sugar Bonded Warehouse has been granted to the town of Calais

Sugar deposited in this store-house (annexed to the Chamber of Commerce's Bonded warehouses, enjoys the privileges granted to these bonded warehouses.

Deposits authorize the delivery of :

1^o Receipts.

2^o Warrants.

These vouchers are negociable.

Rules, regulations and tariff are the same as those applicable to public warehouses.

Hoisting and Lifting Appliances

General Statute Regulation and Tariff

Persons desirous of using the cranes or jiggers must give a previous notice thereof to the Manager of the public plant belonging to the Chamber of Commerce and before using them sing a form on application kept by him.

The cranes and jiggers are worked by engineers appointed by him.

Persons using the 40 ton-power crane are to find their own hemp, wire or chain slings.

The Chamber of Commerce will not be responsible for any damage which may occur from any defect in any crane and jigger or otherwise.

People desiring to work outside the periods of work of the Customs are to make an application, in writing, and to produce, if needful, the Customs' authorization, and they will have to pay, in that case, the charges specified in this tariff.

The time during which the appliances shall have been used shall be rated per half-day, 5 hours, nevertheless, the gear shall be taken away by the Chamber of Commerce's agents as soon as the work is finished.

As regard the crane of 40.000 kilogs-power and at the request of parties concerned, the duration of hire may be rated per hour.

The rates comprise the hire of the appliance and its necessary gear, the supply of the motive power necessary to put in motion, the lubrication and the accessory expenses relative to the working of the appliance the expenses for the management of the appliance by one or several engineers appointed by the grantee : finally, in the matter of the moveable or floating appliances, the expenses of placing in position and of final removal of the appliances.

All other expenses of moving, the displacing of the appliance effected during the time of the hire, at the hirer's request or on the harbour officer's order, the hooking, the unhooking, the placing and the working of packages or masts, as well as the providing of chains and ropes to sling packages and masts shall be at the hirer's expense.

In the special case of the unloading of coal or coke by entire truckloads turned out in the hold of a ship, by means of the powerful moveable crane, the rates comprise the supply by the Chamber of Commerce of two cradles fitted to turn-out the trucks.

The rates for half a day's hire, 5 hours, shall be paid in advance as a guarantee, at the time of application for an appliance.

The rates for one hour must be paid in advance for the 40.000 kilogs-cranes, when the duration of hire is to be paid per hour.

Charges are payable by the party having made the application.

(For the tariff for the use of hydraulic cranes and jiggers see pages 108 and 109).

Rates for the use of Tubs or Buckets

The rates for the use of tubs or buckets shall be for each tub or bucket.

Per day 1 f. 00, per half-day 0.50, per hour 0 f. 15.

The rates shall be double, when the tubs and buckets are used for unloading, hard cargo as stone, cast iron, or pieces of metal.

HYDRAULIC AND ELECTRIC CRANES

Tariff approved by Ministerial decisions dated 29th January 1896,
27th November 1896, 19th December 1900, and

Rates of hire on working days.

Appliances	Power used	Per half-day during the Customs' ordinary hours	Per hour day during the Customs' ordinary hours	Outside the periods of the Customs' ordinary hours	
				per hour-day	per hour-night
Crane of 40 ton-power.....	10,000 kos (20,000) (40,000)	90r 00c 95 00 100 00	30l 00c 32 00 35 00	45f 00c 48 00 52 00	60f 00c 64 00 70 00
Shipping of coal and coke by entire truckloads	—	40 00	12 00	18 00	24 00
Jigger.....	750	12 50	Rates payable per half-day whichever may be the duration of work	3 00	4 50
Crane.....	1,500	15 00		3 00	3 50
Crane of 5,000 kos power.....	2,500 (5,000)	20 00 25 00		4 00 5 00	5 00 7 00

In order to meet the moving and connecting expenses, the hire for the first half day will be increased
by 5 francs.

Tariff applicable for the handling of timber and goods necessarily hoisted above 9 metres from
the quay or for which grabs are used.

Crane.....	1,500	20 00	4 00	6 00
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The hire and rates relative to the use of appliances during Sundays or Holidays shall
be double respectively to the hire and rates for working days.

Rates for the use of cranes for masting and dismasting.

Rates of hire on working days.

Registered tonnage of vessels	For masting and dismasting (bowsprit included) per operation, viz: per mast hove out or hove in.				For pointing a top mast or getting it down			
	During the Customs' regulated hours		Outside the periods of the Customs' regulated hours		During the Customs' regulated hours		Outside the periods of the Customs' regulated hours	
			By day	By night			By day	By night
A ship under 300 tons	20 ^r 00 ^c		30 ^r 00 ^c	40 ^r 00 ^c	10 ^r 00 ^c		15 ^r 00 ^c	20 ^r 00 ^c
» from 301 to 500 »	40 00		60 00	80 00	12 00		18 00	24 00
» » 501 to 1000 »	60 00		90 00	120 00	15 00		22 50	30 00
» » 1001 to 1500 »	80 00		120 00	160 00	20 00		30 00	40 00
» » 1501 or over	100 00		150 00	200 00	25 00		37 50	50 00

The hire and rates relative to the use of appliances during non-working days shall be double respectively to the hire and rates for working days.

Locomotive Engine

Rates of Hire

Per ton of cargo hauled on the railway lines and sidings of the docks :

Minima charges :

Per hour : 3^f 00. — Per day : 20^f 00.

The duration of hire shall be computed from the time the engine shall have been held at the disposal of the lessee up to the time the said lessee shall have declared that he no longer required its assistance.

Hire of open trucks, capable of carrying 10 tons in weight, shall be per day (10 hours without fraction) and per each truck 5 fr. 00.

Half rate in addition shall be charged for the use of the locomotive engine and trucks during non-working days.

Live Cattle Sheds and Pens

Tariff

The following tariff shall be applicable to live animals using the sheds and pens.

Per day of sojourn and per head :

Sheep unsheltered	0 ^f 01 ^c
Sheep sheltered	0 ^f 02 ^c
Oxen and horses unsheltered	0 ^f 075
Oxen and horses sheltered	0 ^f 15 ^c

Weigh-Bridges

Tariff

As regard goods directly laden on trucks by means of the handling appliances belonging to the Chamber of Commerce, the use of weigh-bridges shall be gratuitous but for works done outside the Customs' regulated hours the Chamber of Commerce will charge for the salary of the agent appointed to the management of the appliance :

Per hour.....	0' 60°
Minimum charge....	1' 00°

For the weighing of trucks designed to be laden by means of the cranes belonging to the Chamber of Commerce, the Company will charge for the salary of the agent appointed to the management of the appliance :

Per hour during the Customs' regulated hours	0' 60°
Per hour outside the Customs' regulated hours	0' 75°

All other goods not having been laden on trucks by means of the Chamber of Commerce's appliances shall pay :

Per ton.....	0' 15°
Minimum charge....	1' 50°

Half rate in addition will be charged for the use of weigh-bridges during non-working days.

Careening Gridiron

At the extremity of the western tidal basin, a careening gridiron had formerly been established, but owing to the works carried on for the construction of the new entrance of the West Dock, it had been remo-

ved ; it has lately been re-established on the further end of the tidal basin called “Petit Paradis”. It is situate opposite to the quay where generally fishing boats use to lie, it is 92 feet in length and 21 feet in breadth.

Dues and charges : small boats in ballast shall pay 0^f 15 per registered ton and per day, minimum 2^f 00. The overseer of the gridiron is entitled to collect per day of sojourn 1^f 50 per boat under 50 tons and 2^f 00 if above it.

DRY DOCK

Working of the Dry Dock by the Chamber of Commerce
according to decree dated 23rd October 1895

Extract from Statute Regulation Tariffs

The Dry Dock will be held at the disposal of the Public, under the conditions and charges hereinafter detailed.

Order of entry into the Dry Dock

Sailing or steam-ships shall be admitted into the dock according to the order of making the application, at the time appointed by the Harbour Authorities, save under the exceptions stipulated in paragraph 5 of the present article.

Two or more ships shall not be dry docked at the same time, in the same dock without the consent, in writing, of the captains or shipowners.

Applications shall be entered by the Chamber of

Commerce's agents, in registers with counterpart, in the order and under the date of their receipt.

These registers shall be shown, in their proper order to all interested parties that may wish to take note thereof.

If a ship so entered does not avail herself of her turn she shall take the first turn of which she may be able to avail herself.

Exceptions to this rule will be made in favour of ships belonging to the State or employed on State service to ships in danger of sinking and to those working in the service of a French postal-line subsidized as such, leaving on fixed day, and on the condition that the admittance of this ship cannot be postponed, without her being exposed to the risk of missing the regular date of her departure.

Cases of urgency are however excepted, such cases will be judged firstly by the harbour master and finally by the Engineers of the port.

Only ships actually in the harbour shall be allowed to be entered for admission.

Obligation of the Chamber of Commerce concerning appliances

The Chamber of Commerce are bound to let the dry dock to the Public, not only during the days and hours of Custom's work, but even outside such periods, day and night, when application to that effect shall have been made, in writing, before two o'clock in the afternoon by parties desiring to use the dock.

When requested to that effect, the Chamber of Commerce are bound to place and remove the ships' shores

but the occupants shall be at liberty to perform such operations by their own means, if they desire it.

Duration of the occupation of the Dock

The duration of the occupation of the dock by the same ship is limited to 8 days, from the pumping out of the dock, Sundays and Holidays not included. This duration may be extended by the authority of the Engineers of the port.

The eight days or the supplementary days fixed by the Engineers being expired, the water will be run into the dock and the ship moved into the wet dock, at owner's consignee's or captain's expenses and risk, without right of claim against the Chamber of Commerce or the State.

Superintendence of appliances Optional Hire

Winches on hire can work only under the management of a Chamber of Commerce's agent, whose salary is comprised in the rate of hire.

The hire of winches is moreover optional and a shipowner shall be at liberty to use his own means or those he may choose to employ for working burdens.

Interruption of work

In case the agent appointed as overseer judges there be danger or inconvenience in carrying out the work by means of winches, lessees are to stop such work immediately, until all be resettled in good order, without having a right to any indemnity, even when

such interruption be caused by a defect in the appliances placed at their disposal.

Electric Lighting

Parties using the dock are supplied, on application with electric light according to tariff.

Electric light used on the quays, in the sheds and the warehouses for the lighting of the handling of appliances, shall be charged as follows :

Per lamp of 10 amperes : 1^f 60 per hour.

Per lamp of 20 amperes : 2^f 00 »

When the lamps shall not be used for the lighting of the handling of appliances, the charge shall be 3 f. per hour.

In this last case, the minimum charge shall be 6 f. per lamp.

Half rate in addition shall be charged for the use of electric light during non-working days.

DRY DOCK

Tariff

Maxima rates

A. Pumping out the dock after the entrance of a ship.

1° A ship of 400 tons and under shall pay...	180 ^f 00 ^c
2° For each ton above 400 up to 3.000 tons..	0 ^f 20 ^c
3° For each ton above 3.000 tons.....	0 ^f 10 ^c

B. Hire of the dock per day after being pumped out.

4° A ship of 400 tons and under shall pay...	70r 00 ^c
5° For each ton above 400 up to 3.000 tons.	0f 05 ^c
6° For each ton above 3.000 tons.....	0f 03 ^c

C. Pumping out and keeping the dock dry for the preparation of a cradle or special blocks

(whatever may be the tonnage of the ship).

7° Pumping out the dock	200f 00 ^c
8° For each day the dock is kept dry after pumping out.....	60f 00 ^c

D. Shoring and unshoring ships.

9° A ship of 400 tons and under shall pay .	60f 00 ^c
10° For each ton above 400 up to 3.000 tons.	0f 05 ^c
11° For each ton above 3.000 tons.....	0f 03 ^c

E. Sundry hires and operations.

12° For removing, at captain's request, spars, stanchions or shores, in order to facilitate the repairs of the ship, for each spar, stanchion or shore removed, of whatever dimension	0f 75 ^c
13° For removing and replacing a block, at captain's request, whatever may be the process employed and loss resulting from the operation.....	15r 00 ^c
14° Toll to the ship.....	2f 00 ^c

Hire of staging trestles

(Necessary chocks, wedges and props included)

15° 3 metres in height and under, per day..	0f 50 ^c
16° From 3 to 5 metres, per day.....	1f 00 ^c
17° Above 5 metres, per day.....	2r 00 ^c

Hire of staging planks

18° 5 metres in length and under, per day . .	0 ^f 06 ^c
19° Above 5 metres, per day	0 ^f 10 ^c

F. Electric light.

Vessels making use of this light will have to pay, per hour 0^f 50^c per lamp of 10 amperes ; the rate per hour cannot be less than 2^f 50^c, and the minimum charge cannot be less than 5 francs per each period of lighting.

Charges for use of appliances

Charges for the use of appliances shall be payable by the party having made the application.

The duration for the occupation of the dry dock shall be scaled per day and quarters of a day, each period of such quarter to begin at Midnight, 6 A. M., Midday and 6 P. M.

The first quarter of a day to be computed shall be that following the quarter during which the pumping out has been finished.

The last quarter of a day to be computed shall be that during which the ship has finished her repairs.

The minimum period to be charged shall be one day.

Shipowners are entitled to expect that the pumping out be interrupted during a certain lapse of time which they shall fix by means of a letter lodged at the Manager's office at the time of the ship entering the dry dock. The duration thereof shall be deducted from the whole period of the keeping dry, then the third clause of the present article shall be applicable.

The rate for pumping out the dock shall be paid in advance, as a guarantee, at the time of application.

The rates shall be paid according to the ships' legal

tonnage entered on the certificate of registry, without deduction for steamers of the space occupied by engines, boilers and coal bunkers, that is to say according to gross tonnage.

In case the vessel should not possess a certificate of registry, the tonnage shall be computed according to French regulations, the expense for measuring shall be payable by the shipowner, consignee or captain.

If several ships are admitted into the dock, the charges to be paid shall be calculated on the total tonnage, as if one ship alone was in question, every ship under 400 tons being considered as really measuring 400 tons.

The share of the whole charges so ascertained shall be divided in proportion to the real tonnage of each ship.

Charges comprised in the taxes

The necessary operations for docking or undocking ships shall be at the Chamber of Commerce's expense, except that of haulage to assist, for which they place at the disposal of captains the dry dock's hydraulic capstan; the preparation of necessary cradels or special blocks shall be at the ship's expense.

When the repairs, are finished and before the water is run into the dock. the ship shall be obliged to have removed, at her own expense, the remains and waste of all sorts-issuing from repairs to the hull and laying on the sills, footpaths and platform.

Insurance

The rates charged comprise no insurance whatsoever against either conflagration or injury nor any guarantee whatsoever against plunder.

Recovery of charges for occupation

The Chamber of Commerce are entitled to require the harbour master to refuse to allow any vessel to leave the harbour untill all rates and charges due for the use of the dry dock and hire of appliances have been paid, or a good and sufficient bail has been given in case of dispute about the levy of such rates and charges.

Levy of charges

The levy of charges shall be the same for all parties, without any preference — Any agreement contrary to this clause shall be lawfully void.

Whilst being docked or undocked and during her stay in the dock, the ship shall remain subject to the general statute regulations of the port. She will have to comply with the orders given by the harbour officers and master appointed to the supervision of the port.

The owners or masters of the vessels availing themselves of this dry dock are at perfect liberty either to employ their own labour and find their own materials, or, if they prefer, they can contract with any of shipbuilding or engineering firms to carry out the necessary work for them.

Customs relative to lay-days and demurrage

A resolution dated the 15th May 1852 drawn up by the Tribunal of Commerce, on the motion of the

Chamber of Commerce, determines as follows the customs relative to lay-days and demurrage.

On the vessel being supposed to be berthed either at the quay or in the floating dock appointed by the harbour officers, lay-days begin to run from 24 hours after notice thereof has been given by the captain to consignee and the ship has been reported at the Custom-House.

As regard vessel laden for various consignees, consignees are bound to make their detailed declarations within the 24 hours of the carrying out by the captains of the formalities prescribed to them by the former clause.

If however the captain has observed all the necessary formalities before the delay be expired, consignees shall have a right to claim the benefit of the whole period and the time shall be counted only from the expiration of the 24 hours.

In case of delay from consignees, the captain shall forthwith, on an ordinary warrant from the Tribunal of Commerce, have such goods as are left on board his ship warehoused, all charges being at the delayers' expenses.

Demurrage is ruled as follows, equally for both crew and ship :

1° For ships of 150 register tons and under : 50 centimes (5^d) per ton, per day.

2° For ships of 151 register tons and over : 40 centimes (4^d) per ton, per day.

Rules relating to loading and unloading

The same resolution has also determined as follows the Customs are regard the obligations of owners and captains relative to the loading and unloading of goods.

Part I. — Ships laden for sundry consignees

Inwards

Clause 1. — Every captain is bound to discharge the cargo at his own expense and risk, either into lighters or on shore, at the receivers' option, and to stow the packages per mark on the quay; his responsibility ceases for goods on the quay only when these goods have been cleared by the Custom-officers; this clearance takes place every day for coasting vessels about half an hour before the close of the Custom-House offices.

The captain's responsibility ceases on board lighters from the time the goods have been lowered in the hold of the same and the landing-tackle has been removed.

As regard vessels laden for sundry consignees and coming from foreign countries, the captain's responsibility ceases after the landing and stowing of the packages per mark.

Steam-ships coming from foreign countries are subject to this rule.

Outwards

Packages are to be brought alongside in lighters or on shore alongside the ship, at shippers' expense, the captain's responsibility commences, cases of "*force*

majeure” being excepted, after the clearance has been effected and the goods held at his disposal. Shipping and stowage are at ship’s expense and risk.

Steam-ships are subject to this rule.

Part II. — Ship laden in bulk

Inwards. — From any country

With regard to cargoes of corn, seeds, salt, coal and goods similar to these, every captain is bound to have the goods hove up to the edge of the quay, if the weighing be made on the quay; he is bound to deliver the cargo from ship’s tackles over the side to lighters or canal boats, if the weighing be made on board lighters on canal boats; if the weighing be made on board ship, the captain must deliver the cargo to the place on deck where the weighing is done.

Should the weighing take place in the hold, the captain, is nevertheless bound to deliver the cargo on deck. The cost of labour in the hold, placing ashore and weighing is payable by the receiver of the cargo.

With regard to slates, the captain is liable for the labour of working these out of the hold of his ship, also for delivery of the same on the edge of the quay or on the gunwale of the lighter, where consignee’s men take them and tally them.

With regard to crude plaster or limestone. the captain is also bound to delivery on shore.

Finally, the captain is bound to deliver, on shore or within reach of his ship's tackles over the side on board lighters or canal boats alongside his ship, all goods in casks or packed which are neither weighed nor measured on board his ship. Flax, hemp, tow, metals crude or wrought, timber, deals, battens, boards, tar, pitch are subject to the same rule. All these goods are to be stacked on the quay at the captain's expense.

Ships from Northern Countries

Boards, deals, battens, iron, tar and pitch must be discharged and stacked on the quay by the captain.

Beams liable to be rafted are discharged and launched by the captain: these are then cramped and taken charge of by the consignee's men.

Small beams are discharged by the crew by means of a hanging stage rigged for or aft and hove up to the quay by the consignee's men.

Outwards

Corn, seeds, salt, etc. are taken by the captain within reach of his ship's tackles; free stones are also taken within reach of the ship's tackles, either from quay or from barges.

Timber, metals crude or wrought and similar goods, packages of merchandise are brought alongside either in lighters or on the quay at shipper's expense, the captain is held responsible for goods cleared at the Customs and left at his disposal. Shipping and stowage are at the captain's expense and risk. Should blocks of

stones-ironworks or articles similar to these, be too heavy for the ship's tackles, these are shipped by means of a crane or derrick, and in that case at the shipper's expense and risk.

**Times allowed for loading and discharging
cargoes ruled by Prefectoral ordinance
dated December 13th 1894.**

Calais has ever been in repute for the rapid discharge and loading of vessels.

On the motion of the Chamber of Commerce with a view of giving ships still quicker despatch, merchants and consignees of the port have adopted new regulations for the time allowed for loading and discharging cargoes.

These new regulations, notified applicable to Calais Harbour by Prefectoral order, dated 13th December 1894, have been in force on and after January 1st 1895, in default of a special clause in the charter-party or bill of lading (1).

They run as follows :

Loading or discharging cargoes

STEAMERS FOR OR FROM ANY PART OF THE WORLD

Up to	250 tons,		net register	4 days
From	251 to	500	» »	5 »
From	501 to	750	» »	6 »

(1) These regulations are by far more advantageous to shipowners than those of Antwerp and Havre and will prove beneficial to all classes of shipping.

From 751 to 1000 net register 7 days

Above 1000 tons » » 1 day in addition per
400 tons, net register.
or fraction thereof,

SAILING-SHIP FOR OR FROM ANY PART OF THE WORLD

Up to 300 tons net register 8 days

From 301 to 500 » » 9 »

From 501 to 700 » » 10 »

Above 700 tons » » 1 day in addition per
250 tons, net register
or fraction thereof.

The allowed days, applicable to steamers and sailing vessels, are, in all cases, running days, exclusive of Sundays and legal Fete Holidays.

All previous regulations and customs contrary to the aforesaid are hereby cancelled,

Vessels laden with timber direct from America are allowed five days in addition, whatever their tonnage may be.

The periods of time allowed to any vessels for discharging or loading begin to run from the day after she is made fast alongside.

As soon as the unloading is over, vessels are immediately to take in their ballast. Four days, at the utmost, are allowed for this work, and when the time is expired, they must remove from their quay berth and leave the wet dock, should the Harbour officers deem it necessary.

Rules relating to loading or unloading barges or canal boats

The customs relative to loading or unloading barges or canal boats are determined as follows :

1° Ten working days are allowed for the unloading of canal boats ; lay-days begin to run from the time the bargeman has given notice to consignee of barge's arrival. The day of arrival is not counted.

2° The ten days being expired, a bargeman is allowed for demurrage ;

7 fr. 50 per day for a barge of 51 tons and above.

5 fr. — » » » » from 25 to 50 tons.

4 fr. — » » » » from 25 tons and under.

3° Bargeman are bound to lie alongside the river-bank or quay at the berth assigned by consignee, cases of “ *force majeure*” being excepted.

4° A bargeman having on board his boat 20 tons or upwards for one consignee is bound to enter the floating dock, weather permitting, if the consignee requires it.

5° Unloading is effected at the expense of the consignees, who are bound to take delivery in the hold.

6° As regard timber, from Northern or other countries, deposited on the quays alongside the barges, loading is to be effected by the bargemen at their own expense and risk.

Rates for the Conveyance of goods on the quay railway branches

Goods for export despatched to this port from any station whatever of the Northern railway lines or beyond, either direct to the port or the station, thence re-forwarded to the port provided notice thereof be given within **six hours** after arrival at the station, are conveyed free of charges, by entire truckloads, on the railway branches of the port.

Such in the case also for goods landed in the port and despatched to any station whatever of the Northern railway lines or beyond.

Goods consigned to the station and afterwards conveyed on the port railway branches, for export, according to consignor's or consignee's order, when order for re-forwarding shall have been given before the unloading of the trucks and before the expiration of the due period, but after the **six hours** following the arrival at the station, will be charged, per entire truckload, 0 fr. 30 c. per ton.

Minimum charge per wagon 1 fr. 50 c.

Custom's Hours

In pursuance of a decree dated April 19th 1898, the office hours are the following :

From the 1st April to the 30th September from 7 A. M. to noon
and from 2 to 7 P. M.

From the 1st October to the 31st March, from 8 A. M. to noon
and from 2 to 6 P. M.

By authority dated 27 December 1877, the customs regulation working hours of the port are fixed as follows :

From 1st April to 30th September 5 A. M. to 8 P. M.

From 1st October to 31st March 7 A. M. to 7 P. M.

When in case of urgency, cargoes, under the Custom-house officers' supervision, are worked, exceptionally, during the night or on Sundays and Holidays according to a special license granted by the Customs' Authorities the allowance to be paid to the said officers for work over-time is rated as follows :

From 6 to 7 P. M	2 f. per hour
From 7 P. M. to Midnight	3 f. " "
From Midnight to 6 A. M.	4 f. " "

At all times, on Sundays and Holidays, the rate of 4 f. per hour is extended to 6 A. M. and in day time the over-time is paid 2 f. per hour.

Public weighers and measurers

Tariff

Rates for weighing (weighing only) are scaled from 0 f. 10 c. to 1 f. 25 per ton according to the kind of produce or goods.

Rates for measuring (measuring only) are scaled from 0 fr. 04 c. to 0 fr. 80 c. per ton or cubic metre according to the kind of produce or goods.

Rates for gauging are the following ;

0 f. 20 c. for 100 litres and under — 0 f. 30 c. from 101 to 250 litres — 0 f. 40 c. from 251 litres to 500 litres — 0 f. 50 c. from 501 to 650 litres — 0 f. 75 c. from 651 to 850 litres and 1 f. from 851 to 1.000 litres.

It is a regulation of the port that on the weighing of goods arriving direct from the country of production and on which the freight is payable on the weight delivered, only one-half is to be paid by the ship, the other half to be borne by the cargo.

This rule is in force at Antwerp, Dunkirk, Rouen, Nantes, Bordeaux, Marseilles, ect.

At some other ports. Havre, for instance, according to the rule, the expense of weighing cargoes delivered from a vessel, when the freight is payable on the weight delivered, must be in full borne by the ship.

Calais Chamber of Commerce.

President	MM. Ed. Pagniez O +.
Honorary President	Ad. Darquer +.
Vice-Presidents ...	G. Foissey.
»	J. Vendroux ++.
Honorary Vice-Presidents	J. Hembert +
»	H. Herbelot.
Treasurer.....	J. Piquet.
Secretary-Member.	H. Ravisse.

MEMBERS

MM. G. Boilly 🌿	MM. N. Legendre
E. Chauvin 🌿	A. Noncé 🌿
M. Coolen	A. Valdelièvre O. +
E. Dupont-Lasanté	L. Vincent 🌿 O. +
G. Hembert 🌿	

OFFICERS

MM. A. Neel 🌿, licentiate of laws, General Secretary
T. Ravin, Public Plant and Bonded Warehouses Manager.
L. Lapôtre, Test-Office Manager.
Ch. Alloy 🌿, Accountant Cashier.

Consulates.

Consuls

Belgium.....	MM. N...
	L. Laidoz, chancellor
Great Britain.....	Thurston.
Italy.....	F. Magnier 🌿
Hayti	Léon Laplanche.
Holland.....	J. Vendroux ++.
United States of America.	James Milner.

Vice-Consuls

Austria-Hungary.....	MM. J. Vendroux **.
Brazil.....	J. Vendroux **.
Belgium	H. Hénou fils.
Denmark	J. Vendroux **.
Dominican Republic.....	Edouard A. Collet
Great Britain.. . . .	Capt. E. H. Blomefield.
Germany	P. H. Stavenhagen.
Greece	F. Magnier 
Liberia.....	J. S. Ward.
Norway	Hans Apeness +.
Portugal.....	J. Vendroux **.
Russia.....	Robert Bigo.
Spain	J. Vendroux **.
Sweden	L. Lateux +.
United States of America .	W. M. K. Milner.

Sworn Ship-Brokers

MM. G. Duniagou.
 G. Foissey.
 F. Magnier 
 C. Ravisse.

Yacht-clubs Agents

MM. Ad. Darquer +.
 G. Foissey.

Lloyd's Agent

Capt. E. H. Blomefield.

Return of all Shipping at the Port of Calais during the Year 1912

Entered

Nationality	Sailing		Steam		Total	
	Number of vessels	Tons	Number of vessels	Tons	Number of vessels	Tons
Austrian....	....	....	1	2.212	1	2.212
Belgian....	....	....	2	2.785	2	2.785
British.....	1	88	1.448	652.122	1.449	652.210
French	4	368	322	149.641	326	150.009
Danish .....	....	....	34	34.467	34	34.467
Dutch .....	....	....	3	2.623	3	2.623
German.....	....	....	9	5.876	9	5.876
Grecian.....	....	....	1	1.866	1	1.866
Norwegian..	6	2.957	104	79.124	110	82.081
Russian.....	1	400	5	6.190	6	6.590
Swedish....	1	377	53	43.427	54	43.804
Spanish.....	....	....	11	14.370	11	14.370
Urugayan...	....	....	2	3.521	2	3.521
TOTAL	13	4.190	1.195	998.224	2.008	1,002.414
Coasting....	14	1.058	44	19.714	58	20.772
Grand Total.	27	5.248	2.039	1,017.938	2.066	1,023.186

Cleared

Nationality	Sailing		Steam		Total	
	Number of vessels	Tons	Number of vessels	Tons	Number of vessels	Tons
Austrian....	....	....	1	675	1	675
British.....	2	152	1.442	649.786	1.444	649.938
French	4	368	320	146.872	324	147.240
Danish .....	....	....	31	29.770	31	29.770
Dutch .....	....	....	2	1.750	2	1.750
German.....	....	....	10	5.714	10	5.714
Grecian.....	....	....	1	1.866	1	1.866
Norwegian..	4	1.320	97	73.472	101	74.792
Russian.....	1	400	5	6.190	6	6.590
Swedish....	1	377	53	42.031	54	42.408
Spanish.....	....	....	11	15.015	11	15.015
Urugayan...	....	....	3	4.983	3	4.983
TOTAL	12	2.617	1.976	978.124	1.988	980.741
Coasting....	18	1.623	40	19.342	58	20.965
Grand Total.	30	4.240	2.016	997.466	2.046	1,001.706

Imports and Exports to and from Calais

Imports. — Imports particularly consist of beer, cattle, coals, cotton-wool, grain, other than wheat, hoofs and bones : ice, iron, cast and wrought, etc : iron ware, jute, machinery and parts of machinery ; milk condensed ; oils, fine ; ores of divers kinds : petroleum, ordinary and refined ; pit-props ; pork, salt, rags, sheep : silk, raw, spun, thrown, waste ; skins, fresh or dried ; steel, in bars and plates ; steel-wire ; tea ; timber : tissues, cotton and wool ; wheat : wood, exotic ; wood-pulp ; woodware ; wool, raw, yarns, flax and cotton : yeast.

Exports. — The principal articles of export consist of : basket-work ; biscuit, sweet ; cables, submarine ; chalk ; champagne ; chemical-products ; clocks ; coals and patent fuel ; corks ; eggs ; fish ; flowers natural ; fruits, fresh or candied ; furniture and woodware ; glass, bottles, etc. ; glucose ; grain and flour ; haberdashery, toys, etc ; hay, straw and fodder ; hides, dressed ; marbles, meat ; metal goods, iron, copper, etc. ; milk, condensed ; mineral waters ; musical instruments ; ochres ; paper ; phosphates, natural ; potash and carbonate ; potatoes ; poultry : rags ; silk, in cocoon or spun ; stones ; sugar, native, raw ; tissues ; lace, tulle, etc. ; vegetables ; wines and liquors ; wool, raw, woollen yarns : yeast, etc.

Calais Free Port

The French Government appearing favourably inclined toward the creation of **Free Ports**, the Calais Municipality and Chamber of Commerce have been considering the desirability of applying for such a decree in favour of Calais. Should this be obtained and adopted, it will mean the establishment, on the extensive grounds near the quays, of "free zones", denationalised as regards Customs, within which any merchandise may be landed, manipulated or transformed previous to either entering the country in a marketable or refined state or being reexported.

It is obvious that such a scheme would offer great economic advantages to these merchants and importers who are at present taxed by the Customs on the gross weight or volume of their imports. Besides, it would tend very much to the prosperity of the port of Calais ; few places on the French coast offer such facilities for ships of heavy tonnage and the most modern systems having been adopted for the rapid loading and unloading of freights.

Semaphores

There are many semaphores established on the French coasts, where only the international Code of Signals are now used.

Passing ships are able to exchange communication with the semaphores and, when required, their messages are forwarded according to the fixed tariff.

When messages are addressed to a vessel in the roads, the address must state, besides the ordinary indications, the name, the official number and the nationality of the vessel the said messages are to be transmitted to.

The rates for telegrams received from or transmitted to a vessel in the roads by means of these Telegraphic Signal Stations are fixed for transmission as follows :

On the French coasts :

An Inland telegram is charged 0 fr. 05 c. (d.) per word. Minimum charge 0 fr. 50 (5 d.) per telegram.

A telegram for a foreign country is charged 2 fr. 00 (1 s. 8 d.)

A telegram transmitted by a foreign semaphore and addressed to a party in France is charged 2 fr. 00 (1 s. 8 d.)

These charges are additional to the rates for the transmission and the accessory charges for delivery, if any are to be so charged, scaled according to the general regulations.

The whole amount of rates and charges for telegrams to be transmitted to a vessel in the roads is payable by the sender. Rates and charges for telegrams sent by vessels are payable by the party they are addressed to.

Storm warnings on the Northern and North-Western French Coasts

Signals are made by means of a cone and a cylinder which, when hoisted, appear under the shape of a triangle and a black square figure, these signals remain hoisted as long as it may be deemed necessary.

The cone, point downwards, means that strong winds are probable from Southward (from S. E. round by S. to N. W.)

The cone, point upwards, means that strong winds are probable from Northward (from N. W. round by N. to S. E.)

The cylinder above cone, point downwards, means a storm is probable from Southward.

The cylinder under cone, point upwards, means a storm is probable from Northward.

Note. — *The cylinder is never used without the cone.*

It should be well understood that the signals do not foretell the coming weather or wind ; their object is to warn Seamen of the approach of bad weather and to acquaint them with the probable direction of the wind they are to expect. Therefore each signal simply means :

“ *Look out, bad weather may reach you*”.

On the English coasts, the same signals are shown, they have the same meaning, only the cone is sometimes substituted during the night by three lights hung on a triangular frame.

The storm signals are transmitted by the London Meteorological Office, they concern only the Northern

and North Western coasts of France as far as Nantes, so that signals made by the Rochefort Observatory to the remainder of the Western coast are under its own responsibility.

Signals indicating the weather at sea

The following weather signals have been adopted at the principal ports and shipping places on the coasts of France, in addition to the established storm warnings:

- 1° A flag of any colour indicates : weather doubtful
barometer inclined to fall.
- 2° A short pendant (cornet) of any colour indicates :
appearance of bad weather, heavy sea, barometer falling.
- 3° A pennant of any colour indicates : appearance of
better weather, barometer rising.
- 4° A flag above cornet indicates : the entrance of the
port has become dangerous, be careful.
- 5° A flag below cornet indicates : the life-boat is going
out.

When fine weather has already set in, no signal is made.

As the last two signals (n° 4 & 5) belong to the international code signal, wherein they have their particular meanings, in order to avoid misunderstanding, the flag, at some ports and semaphores, is by agreement substituted by a ball.

Storm warning and weather signals remain flying half an hour in the morning and in the evening and at any other time of the day, if it be deemed necessary

at the Calais signal station or semaphore established a mile westward of the port.

Notice to Mariners ⁽¹⁾

Uniform System of Buoyage and Beacons on the Coasts of France

All buoys and beacons are characterized by colour and by form of topmark. — The term *starboard* means the right hand side approaching from seaward; the term *port* means the left hand side. — The term *separation of channels* is given to the marks placed at the seaward extremity of middle grounds: these at the inshore extremity are named *junction of channels* marks. — The marks on shoals of small extent are named *isolated danger* marks. — Starboard marks are *red*, surmounted by a conical topmark, if necessary numbered by even Nos. commencing from seaward, — Port marks are *black*, surmounted by cylindrical topmarks, if necessary numbered by even Nos. commencing from seaward. — Separation of channels marks are *black* and *white* horizontally, surmounted by two cone bases together. — Junction of channels marks are *white* and *red* horizontally, surmounted by two cone points together, — Isolated danger marks *red* and *black* horizontally, surmounted by a sphere. — Wreck marks are *green*. Names or Nos. are painted *white*,

(1) This notice n° 189, issued on the 29th October 1891, by the French Marine Hydrographie Department, cancels all previous dispositions.

Miscellaneous information

To avoid a fine of from £ 1 to £ 20, captains are particularly informed that they must produce to the Customs, on entering any French port, a manifest dated and signed by them, stating the nature of cargo and principal stores, including especially tobacco, snuff, cigars loose or in boxes, matches as well as all dutiable provisions.

Coals of all sorts, french or english, for ship's use and bunkers can be had at all times at Calais at a reasonable price. The coal is delivered in bags of uniform weight, none is shipped in bulk, so that a captain may easily ascertain the quantity delivered. Vessels can lie close up the coal depots.

Provisions and stores can be obtained at reasonable prices.

A branch of the Bank of France (Banque de France) is established at Calais, and there exist in the town several private banking establishments dealing with England.

Divers can be found at this port.

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ENTRÉE DE LA MER DU NORD

ET PAS-DE-CALAIS

Extrait de la Carte N° 3402

du

Dépôt des Cartes et Plans de la Marine

1875

Les Sondes sont exprimées en Metres

Soundings shown hereon are metres One metre is equal to 3 ft 3 in

Corrections : sondages en 1875 Nov 1876 Nov 1877 1878 Sept 1878

Longitude à l'Occident du Méridien de Paris

revisions essentielles en Dec 1875, Dec 1876, Dec 1879, Juillet 1880, Janv 1881, Janv 1882, Juin 1882, Janv 1885



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